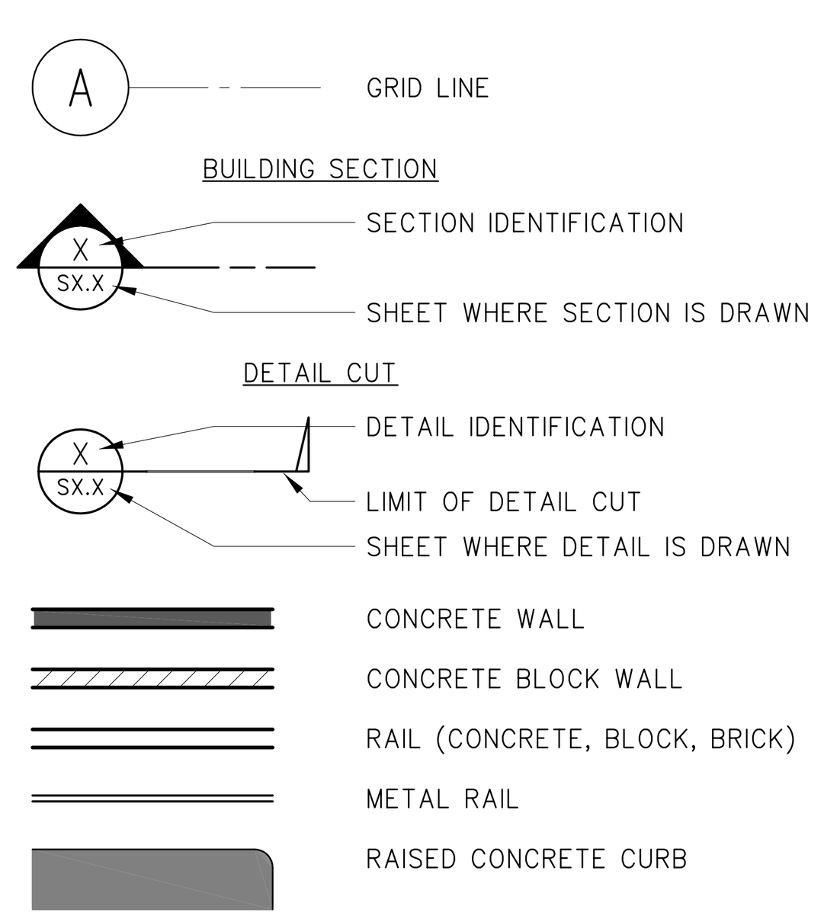
ABBREVIATIONS

&	AND
L	ANGLE
@	AT
A.B.	ANCHOR BOLT
ACI	AMERICAN CONCRETE INSTITUTE
A.D.	AREA DRAIN
ADD.	ADDITION
AGGR.	AGGREGATE
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
AL.	ALUMINUM
ALT.	ALTERNATE
APPROX.	APPROXIMATELY
ARCH.	ARCHITECTURAL
ASPH.	ASPHALT
ASSN.	ASSOCIATION
ASTM	AMERICAN STANDARD FOR TESTING AND MATERIALS
AWS	AMERICAN WELDING SOCIETY
BET.	BETWEEN
BLDG.	BUILDING
BLK.	BLOCK
BLKG.	BLOCKING
BM.	BEAM
BOT.	BOTTOM
CBC	CALIFORNIA BUILDING CODE
C.B.	CATCH BASIN
CEM.	CEMENT
C.G.S.	CENTER GRAVITY STEEL
C.J.	CONSTRUCTION JOINT
℄	CENTERLINE
CLG.	CEILING
CLKG.	CAULKING
CLR.	CLEAR
C.M.U.	CONCRETE MASONRY UNIT
CO.	COMPANY
C.O.	CHANGE ORDER
COEF.	COEFFICIENT
COL.	COLUMN
COM.	COMMON
CONC.	CONCRETE
CONST.	CONSTRUCTION
CONT.	CONTINUOUS
CONTR.	CONTRACTOR
CORP.	CORPORATION
CTR.	CENTER
CTSK.	COUNTERSUNK
CU.FT.	CUBIC FEET
CU.IN.	CUBIC INCH
CU.YD.	CUBIC YARD
DBL.	DOUBLE
DET.	DETAIL
D.F.	DOUGLAS FIR
DIA.	DIAMETER
DIAG.	DIAGONAL
DIM.	DIMENSION
DIV.	DIVISION
D.L.	DEAD LOAD
DN.	DOWN
DO.	DITTO
DWG.	DRAWING
DWGS.	DRAWINGS
(E),EXIST.	EXISTING
EA.	EACH
E.F.	EACH FACE
E.J.	EXPANSION JOINT
EL.	ELEVATION
ELEC.	ELECTRICAL
ELEV.	ELEVATOR
E.N.	EDGE NAILING
ENGR.	ENGINEER
ENGRG.	ENGINEERING
EQ.	EQUAL
EQUIP.	EQUIPMENT
E.S.	EACH SIDE
E.W.	EACH WAY
E-W	EAST-WEST
EXP.	EXPANSION
EXT.	EXTERIOR
F.D.	FLOOR DRAIN
FDN.	FOUNDATION
F.F	FINISH FLOOR
F.G.	FINISH GRADE
FIN.	FINISH
FLR.	FLOOR
F.O.	FACE OF
F.O.C.	FACE OF CONCRETE
F.O.M.	FACE OF MASONRY
F.O.S.	FACE OF STUD
F.S.	FAR SIDE
FT.	FOOT OR FEET
FTG.	FOOTING
GA.	GAGE
GALV.	GALVANIZED
GB.	GRADE BEAM
GLB.	GLUE LAMINATED BEAM
GND.	GROUND
GR.	GRADE
GYP BD.	GYPSUM BOARD
HDR.	HEADER
HEX.	HEXAGON
HGR.	HANGER
HORIZ.	HORIZONTAL
HR.	HOUR
HT.	HEIGHT
I.D.	INSIDE DIAMETER
I.F.	INSIDE FACE
IN.	INCH (ES)
INC.	INCORPORATED
INFO.	INFORMATION
INT.	INTERIOR
JST.	JOIST
JT.	JOINT
K.	KIP (1,000 LBS)
K/FT	KIPS PER FOOT
LAM.	LAMINATED
LIN.	LINEAR
L.L.	LIVE LOAD
LT.WT.	LIGHT WEIGHT
MATL.	MATERIAL
MAX.	MAXIMUM
M.B.	MACHINE BOLT
M.D.	MID DEPTH
MECH.	MECHANICAL
MEMB.	MEMBRANE
MFR.	MANUFACTURER
MIN.	MINIMUM
MISC.	MISCELLANEOUS
MIXT.	MIXTURE
M.S.	MIDDLE STRIP
MTL.	METAL
(N)	NEW
N.I.C.	NOT IN CONTRACT
NOM.	NOMINAL
No.,OR #	NUMBER
N-S	NORTH-SOUTH
N.T.S.	NOT TO SCALE
o/c	ON CENTER
O.D.	OUTSIDE DIAMETER
O.F.	OUTSIDE FACE
O.H.	OPPOSITE HAND
OPNG.	OPENING
OPP.	OPPOSITE
ORIG.	ORIGINAL
OSHPD	OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
PERM.	PERMANENT
PERP.	PERPENDICULAR
PC	PIERCAP
PL.	PLATE
ℙ	PROPERTY LINE
PLYWD.	PLYWOOD
PROJ.	PROJECT
P.S.F.	POUNDS PER SQUARE FOOT
P.S.I.	POUNDS PER SQUARE INCH
PT.	POINT
P.T.	POST-TENSION(ED)
P.T.	PRESSURE TREATED
P.T.I.	POST TENSIONING INSTITUTE
RAD.	RADIUS
R.D.	ROOF DRAIN
REF.	REFERENCE
REINF.	REINFORCE(D)/REINFORCING
REQ'D.	REQUIRED
R.J.	ROOF JOIST
RM.	ROOM
R.O.	ROUGH OPENING
R.R.	ROOF RAFTER
RWD.	REDWOOD
S.A.D.	SEE ARCHITECTURAL DRAWINGS
SCHED.	SCHEDULE
SEAONC	STRUCTURAL ENGINEERS OF NORTHERN CALIFORNIA
SECT.	SECTION
S.F.	SOIL FACE
SHT.	SHEET
SHTG.	SHEATHING
SIM.	SIMILAR
S.O.G.	SLAB-ON-GRADE
SPEC.	SPECIFICATION
SPECS.	SPECIFICATIONS
SQ.	SQUARE
SQ.FT.	SQUARE FEET
S.S.	SELECT STRUCTURAL
S.STL.	STAINLESS STEEL
STAG.	STAGGER(ED)
STD.	STANDARD
STL.	STEEL
STOR.	STORAGE
STRL.	STRUCTURAL
SUSP.	SUSPENDED
SYM.	SYMMETRICAL
T.&G.	TONGUE AND GROOVE
THK.	THICK
T.O.B.	TOP OF BEAM
T.O.C.	TOP OF CURB
T.O.CONC.	TOP OF CONCRETE
T.O.F.	TOP OF FOOTING
T.O.P.	TOP OF PAVEMENT
T.O.PR.	TOP OF PIER
T.O.S.	TOP OF SLAB
T.O.STL.	TOP OF STEEL
TOT.	TOTAL
T.O.W.	TOP OF WALL
T.S.	TUBE STEEL
TYP.	TYPICAL
U.B.C.	UNIFORM BUILDING CODE
U.N.O.	UNLESS NOTED OTHERWISE
VERT.	VERTICAL
W/	WITH
WD.	WOOD
W/O	WITHOUT
WP.	WATERPROOF
W.P.J.	WEAKENED PLANE JOINT
WT.	WEIGHT
W.W.F.	WELDED WIRE FABRIC
X. STR.	EXTRA STRONG

GENERAL SYMBOLS



GRID LINE

BUILDING SECTION
- SECTION IDENTIFICATION
- SHEET WHERE SECTION IS DRAWN

DETAIL CUT
- DETAIL IDENTIFICATION
- LIMIT OF DETAIL CUT
- SHEET WHERE DETAIL IS DRAWN

CONCRETE WALL

CONCRETE BLOCK WALL

RAIL (CONCRETE, BLOCK, BRICK)

METAL RAIL

RAISED CONCRETE CURB

GENERAL NOTES

1. **CODE:** CONSTRUCTION SHALL CONFORM TO THE PROVISIONS OF THE 2001 CBC AND STANDARDS REFERENCED THEREIN.
2. **GENERAL DETAILS:** AND NOTES ON THESE SHEETS SHALL APPLY UNLESS SPECIFICALLY SHOWN OR NOTED OTHERWISE. CONSTRUCTION DETAILS NOT FULLY SHOWN OR NOTED SHALL BE SIMILAR TO DETAILS SHOWN FOR SIMILAR CONDITIONS. ALL WORK OR CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE BUILDING CODES, REGULATIONS AND SAFETY REQUIREMENTS.
3. **DISCREPANCIES:** THE CONTRACTOR SHALL INFORM THE **ENGINEER** IN WRITING, DURING THE BIDDING PERIOD OF ANY DISCREPANCIES OR OMISSIONS NOTED ON THE DRAWINGS OR IN THE SPECIFICATIONS OR OF ANY VARIATIONS NEEDED IN ORDER TO CONFORM TO CODES, RULES AND REGULATIONS. UPON RECEIPT OF SUCH INFORMATION, THE **ENGINEER** WILL SEND WRITTEN INSTRUCTIONS TO ALL CONCERNED. ANY SUCH DISCREPANCY, OMISSION, OR VARIATION NOT REPORTED SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, AND WORK SHALL BE PERFORMED IN A MANNER AS DIRECTED BY THE **ENGINEER.**
4. **SHORING:** IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO DESIGN AND PROVIDE ADEQUATE SHORING, BRACING, AND FORMWORK, ETC., AS REQUIRED FOR THE PROTECTION OF LIFE AND PROPERTY DURING THE CONSTRUCTION OF THIS BUILDING. EXCESS LOAD CAPACITY OF SLAB SHALL NOT EXCEED LOADS EQUIVALENT TO THE DESIGN SUPERIMPOSED LOADS LESS CONSTRUCTION DEAD AND LIVE LOADS. DESIGN SUPERIMPOSED LOADS INCLUDE LIVE LOAD, PARTITION LOAD, AND ANY OTHER LOAD NOT IN PLACE AT THE TIME OF SHORING.
5. **EXCAVATION:** THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL EXCAVATION PROCEDURE INCLUDING LAGGING, SHORING, AND PROTECTION OF ADJACENT PROPERTY, STRUCTURES, STREETS AND UTILITIES IN ACCORDANCE WITH THE LOCAL BUILDING DEPARTMENT.
6. **OTHER TRADES:** SEE ARCHITECTURAL, ELECTRICAL, AND MECHANICAL DRAWINGS FOR SIZE AND LOCATION OF PIPE, VENT, DUCT AND OTHER OPENINGS AND DETAILS NOT SHOWN ON THESE STRUCTURAL DRAWINGS. ALL DIMENSIONS ARE TO BE CHECKED AND VERIFIED WITH THE ARCHITECTURAL DRAWINGS.
7. **BACKFILL:** BACKFILL AROUND THE EXTERIOR PERIMETER OF WALL SHALL NOT BE PLACED UNTIL AFTER THE WALLS ARE SUPPORTED BY THE COMPLETION OF INTERIOR FLOOR SYSTEMS. DO NOT PROCEED WITH BACKFILL UNTIL (7) DAYS AS A MINIMUM AFTER THE COMPLETION OF INTERIOR FLOOR SYSTEMS UNLESS WALLS ARE ADEQUATELY BRACED. BACKFILL SHALL NOT BE PLACED UNTIL AFTER COMPLETION AND INSPECTION OF WATERPROOFING WHERE WATERPROOFING OCCURS.
8. **BRACING:** TEMPORARY BRACING SHALL BE PROVIDED AS REQUIRED TO HOLD ALL COMPONENTS OF THE STRUCTURE IN PLACE UNTIL FINAL SUPPORT IS SECURELY ANCHORED.
9. **WELDING:** ALL WELDING SHALL BE PERFORMED BY WELDERS CERTIFIED FOR THE WELDS TO BE MADE; SEE SPECIFICATIONS FOR WELDING PROCESS TO BE USED. WELDING OF REINFORCING STEEL FOR USE IN STRUCTURAL CONCRETE OR STRUCTURAL MASONRY SHALL BE PERMITTED ONLY WHERE SPECIFICALLY DESIGNATED ON THESE PLANS OR WHERE SPECIFICALLY APPROVED BY THE **ENGINEER.** SEE ADDITIONAL NOTES ON SHEETS S1.2 & S1.3
10. **SIDEWALK PROTECTION:** PEDESTRIAN TRAFFIC SHALL BE PROTECTED AS SPECIFIED IN SECTION 3303 OF THE CBC.
11. **MATERIALS AND WORKMANSHIP:** THE CONTRACTOR SHALL SUPPLY ALL LABOR, MATERIALS, EQUIPMENT AND SERVICES OF EVERY KIND, INCLUDING WATER AND POWER, NECESSARY FOR THE PROPER EXECUTION OF THE WORK SHOWN OR INDICATED ON THESE DRAWINGS. ALL MATERIAL SHALL BE NEW AND MATERIALS AND WORKMANSHIP SHALL BE IN GOOD QUALITY. ALL WORKPERSONS AND SUBCONTRACTORS SHALL BE SKILLED IN THEIR TRADE.
12. **MATERIALS AND WORKMANSHIP WARRANTY:** THE CONTRACTOR SHALL REPLACE ANY DEFECTIVE MATERIALS AND CORRECT POOR WORKMANSHIP WITH NO ADDITIONAL COSTS TO THE **CITY**, AND SHALL REMEDY ANY DEFECTS IN MATERIAL OR WORKMANSHIP WHICH APPEAR IN ONE YEAR FROM THE DATE OF COMPLETION OF THE JOB. THIS WARRANTY APPLIES TO THE WORK DONE BY THE SUBCONTRACTORS AS WELL AS THE WORK DONE BY THE EMPLOYEES OF THE CONTRACTOR.
13. **SAFETY:** THE CONTRACTOR SHALL ADEQUATELY PROTECT HIS/HER WORK, ADJACENT PROPERTY, AND THE PUBLIC, AND BE RESPONSIBLE FOR DAMAGE OR INJURY DUE TO HIS/HER ACT OR NEGLECT.
14. **JOB SITE:** THE PREMISES SHALL BE KEPT FREE FROM ACCUMULATION OF WASTE MATERIALS AND DEBRIS, AND AT THE END OF THE JOB, THE CONTRACTOR SHALL REMOVE ALL RUBBISH, SURPLUS MATERIALS, AND TOOLS AND LEAVE THE BUILDING BROOM CLEAN.
15. **SHOP DRAWINGS:** SHOP DRAWINGS ARE AN AID FOR FIELD PLACEMENT, AND ARE SUPERSEDED BY THE STRUCTURAL DRAWINGS. IT SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO MAKE CERTAIN THAT ALL CONSTRUCTION IS IN FULL AGREEMENT WITH THE LATEST STRUCTURAL DRAWINGS.
16. **SHOP DRAWING CHECK:** THE CONTRACTOR SHALL SUPPLY THE **ENGINEER** WITH SHOP DRAWINGS IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS IN A TIMELY FASHION, ALLOWING ADEQUATE LEAD TIME FOR REVIEW BY THE **ENGINEER.** SEE PROJECT SPECIFICATION FOR SUBMITTAL PROCEDURE. THE REVIEW OF THE SHOP DRAWINGS BY THE **ENGINEER** IS ONLY FOR GENERAL COMPLIANCE WITH THE STRUCTURAL DRAWINGS AND SPECIFICATIONS. THIS REVIEW DOES NOT GUARANTEE IN ANY WAY THAT THE SHOP DRAWINGS ARE CORRECT, COMPLETE, NOR DOES IT INFER THAT THEY SUPERSEDE THE STRUCTURAL DRAWINGS.
17. **REBAR DIMENSIONS:** ALL DIMENSIONS SHOWING THE LOCATION OF REINFORCING STEEL NOT NOTED AS "CLEAR" OR "COVER", ARE TO THE CENTER OF STEEL.
18. **DIMENSIONS:** ALL INDICATED DIMENSIONS SHALL HAVE PREFERENCE OVER SCALE.

ALLOWANCES

1. **CRACKING ALLOWANCE:** THE CONTRACTOR SHALL INCLUDE IN HIS/HER PROPOSAL AND CONTRACT, A BUDGET FOR SEALING CERTAIN CRACKS IN THE POST-TENSIONED SLABS. THE CONTRACTOR SHALL REIMBURSE THE **CITY** FOR THE UNUSED PORTION AT THE END OF THE WARRANTY PERIOD. THE **ENGINEER** SHALL DETERMINE WHICH CRACKS SHALL BE SEALED. ALL CONCRETE SLABS ABOVE HABITABLE SPACES SHALL BE COVERED WITH A WATERPROOF MEMBRANE, AS SPECIFIED BY THE **ARCHITECT.** THE CONTRACTOR SHALL PROVIDE A UNIT PRICE PER LINEAL FOOT OF REPAIR USING A SELF-LEVELING POLYURETHANE SEALANT, SUCH AS SIKAFLEX BY SIKA CORP., ROUT ENTIRE LENGTH OF CRACK PRIOR TO SEALING.

   THE FOLLOWING DOLLAR AMOUNTS SHALL BE INCLUDED.

DESCRIPTION	COST
PARKING AREAS (ELEVATED DECKS)	$0.20 PER SQ.FT.
EXPOSED PLAZA AND BALCONIES	$0.15 PER SQ.FT.
ALL OTHER FLOOR AREAS	$0.12 PER SQ.FT.

   (OR AS PROVIDED IN THE SPECIFICATIONS)

2. **REBAR:** THE CONTRACTOR SHALL INCLUDE IN HIS/HER PROPOSAL AND CONTRACT, AN ALLOWANCE FOR REINFORCING BARS THAT THE **ENGINEER** MAY USE AT HIS/HER DISCRETION DURING CONSTRUCTION. THE AMOUNT OF THE ALLOWANCE IS **XXXX** lbs. PER ELEVATED DECK **(OR AS PROVIDED IN THE SPECIFICATIONS).** THE CONTRACTOR SHALL PROVIDE A UNIT PRICE PER POUND, INSTALLED FOR STEEL REINFORCEMENT.
3. **POST-TENSIONING:** THE CONTRACTOR SHALL INCLUDE IN HIS/HER PROPOSAL AND CONTRACT, AN ALLOWANCE FOR POST-TENSIONING REINFORCING THAT THE **ENGINEER** MAY USE AT HIS/HER DISCRETION DURING CONSTRUCTION. THE AMOUNT OF THE ALLOWANCE IS **XXXX** lbs.PER ELEVATED DECK **(OR AS PROVIDED IN THE SPECIFICATIONS).** THE CONTRACTOR SHALL PROVIDE A UNIT PRICE PER POUND, INSTALLED, FOR POST-TENSIONING REINFORCING.

LOADS

1. **VERTICAL LOADS - PSF:** IN ADDITION TO THE DEAD LOADS, THE FOLLOWING SUPER-IMPOSED LOADS ARE USED IN THE DESIGN. LIVE LOADS ARE REDUCED IN ACCORDANCE WITH SECTION 1607.

DESCRIPTION	LOADS
ROOF	20
PARKING	50
COMMERCIAL	75
CORRIDORS	100
SIDEWALKS	250
LOADING DOCK	250

2. **SEISMIC DESIGN**

   $V = \frac{C_v I}{RT} W$, $V_{MAX} \le \frac{2.5 C_a I}{R} W$, $V_{MIN} > 0.11 C_a I W$

   IN ADDITION FOR ZONE 4: $V_{MIN} \ge \frac{0.8 Z N_z I}{R} W$

STRUCTURAL SYSTEM:	R = 5.5
OCCUPANCY TYPE IMPORTANT FACTOR:	I = 1.0
SEISMIC ZONE COEFFICIENT:	Z = 0.4
SEISMIC SOURCE TYPE:	A
SOIL PROFILE TYPE:	S_D
SEISMIC COEFFICIENT:	Ca = 0.44
SEISMIC COEFFICIENT:	Cv = 0.74
NEAR SOURCE FACTOR:	Na = 1.00
NEAR SOURCE FACTOR:	Nv = 1.16
SEISMIC FORCE AMPLIFICATION FACTOR:	Ω_o = 2.8
WIND DESIGN	**DATA**
BASIC WIND SPEED:	= 70 MILES PER HOUR
EXPOSURE:	C
IMPORTANCE FACTOR:	I = 1.0

FOUNDATION NOTES

1. **DESIGN:** FOUNDATION DESIGNED IN CONFORMANCE WITH RECOMMENDATIONS BY LOWNEY ASSOCIATES ; REPORT NO. 1167-3; DATED NOVEMBER 6, 2003 . FOLLOW THE RECOMMENDATIONS IN THE SOILS REPORT FOR FILL QUALITY, COMPACTION REQUIREMENTS, AND SUBGRADE PREPARATION.
2. **FOOTINGS:** ALL FOOTINGS SHALL EXTEND A MINIMUM OF **2** FEET BELOW FINISHED OR NATURAL GRADE INTO UNDISTURBED SOIL. FOLLOW THE RECOMMENDATIONS IN THE SOILS REPORT FOR SPECIFIC REQUIREMENTS.

DESCRIPTION	CONTINUOUS FOOTINGS	ISOLATED FOOTINGS
VERTICAL DEAD LOAD	3000 PSF	3000 PSF
VERTICAL DEAD + LIVE LOADS	4500 PSF	4500 PSF
TOTAL LOADS (D+L+S or W)	6000 PSF	6000 PSF

3. **LATERAL LOADS:** ARE RESISTED BY FRICTION AND PASSIVE PRESSURE. A FRICTION COEFFICIENT OF **0.30** IS USED. PASSIVE PRESSURE IS **300** PCF AGAINST THE FOOTINGS.
4. **RETAINING WALLS:**

DESCRIPTION	DATA
MAXIMUM ALLOWABLE BEARING PRESSURE	SEE #2 ABOVE
ACTIVE SOIL PRESSURE: RESTRAINED	45 PCF +8H+1/2S
ACTIVE SOIL PRESSURE: UNRESTRAINED	45 PCF + 1/3S
PASSIVE SOIL PRESSURE: EQUIVALENT FLUID WEIGHT	300 PSF/FT.
COEFFICIENT OF FRICTION	0.3

5. **DRILLED PIERS:** ALLOWABLE BEARING VALUES INCREASED BY 1/3 WHERE WIND OR SEISMIC LOADS ACT ALONE OR IN COMBINATION WITH VERTICAL LOADS.

DESCRIPTION	DATA
MAX BEARING (DEAD + LIVE)	XXXX
UPLIFT	XXXX
LATERAL RESISTANCE	XXXX

6. **WATERPROOFING:** ALL RETAINING WALLS OF THE BUILDING SHALL BE WATERPROOFED.
7. **INSPECTIONS:** THE **GEOTECHNICAL ENGINEER** OR HIS/HER REPRESENTATIVE SHALL INSPECT ALL SUBGRADE PREPARATION WORK PRIOR TO THE PLACEMENT OF ANY REINFORCING STEEL OR CONCRETE AND SHALL PERFORM TESTS AS NECESSARY TO VERIFY THAT SUCH WORK IS IN CONFORMANCE WITH THE RECOMMENDATION GIVEN IN THE SOIL REPORT.

MASTER REVISION LIST

NO.	DATE	BY	DESCRIPTION	SHEETS

CONCRETE NOTES

1. **CONCRETE PLACEMENT AND QUALITY:** SHALL BE PER RECOMMENDATIONS IN ACI SP-15. A COPY SHALL BE AVAILABLE AT THE CONSTRUCTION SITE DURING CONSTRUCTION.
2. **DEBRIS:** REMOVE ALL DEBRIS FROM FORMS BEFORE POURING.
3. **SEGREGATION OF AGGREGATES:** CONCRETE SHALL NOT BE DROPPED THROUGH REINFORCING STEEL (AS IN WALLS, COLUMNS, AND DROP CAPITALS) SO AS TO CAUSE SEGREGATION OF AGGREGATES. USE HOPPERS, CHUTES OR TRUNKS OF VARYING LENGTHS SO THAT THE FREE UNCONFINED FALL OF CONCRETE SHALL NOT EXCEED 5 FEET, AND A SUFFICIENT NUMBER SHALL BE USED TO ENSURE THE CONCRETE IS BEING KEPT LEVEL AT ALL TIMES.
4. **INSERTS:** ALL ITEMS TO BE CAST IN CONCRETE SUCH AS REINFORCING, DOWELS, BOLTS, ANCHORS, PIPES, SLEEVES, ETC., SHALL BE SECURELY POSITIONED IN THE FORMS BEFORE PLACING THE CONCRETE.
5. **DOWELING:** ALL WALLS AND COLUMNS SHALL BE DOWELED INTO FOOTINGS, WALLS, BEAMS, OR SLABS WITH BARS OF THE SAME SIZE AND SPACING AS THE BARS ABOVE. USE A CLASS B LAP EXCEPT WHERE SPECIFICALLY INDICATED.
6. **SPLICES:** VERTICAL WALL BARS SHALL BE SPLICED AT OR NEAR FLOOR LINES. SPLICE BARS IN SPANDRELS, WALLS, BEAMS, ETC., AS FOLLOWS: TOP BARS AT CENTERLINE OF SPAN, BOTTOM BARS AT THE SUPPORT. ALL REINFORCING STEEL SHALL BE SECURELY WIRED AND PROPERLY SUPPORTED ABOVE THE GROUND AND AWAY FROM FORMS. GRADE BEAMS SHALL BE SPLICED WHERE SPECIFICALLY INDICATED.
7. **CONSTRUCTION JOINTS:** THE CONTRACTOR SHALL OBTAIN THE **ENGINEERS'** AND **CITY'S** APPROVAL OF CONSTRUCTION JOINT LOCATIONS IN ALL SLABS, BEAMS, AND SHEAR WALLS NOT SHOWN ON THE STRUCTURAL DRAWINGS. CONSTRUCTION JOINTS SHALL BE CLEANED AND CONSTRUCTED ACCORDING TO THE FOLLOWING SCHEDULE. ALL CONSTRUCTION JOINTS SHALL HAVE ALL LAITANCE REMOVED, PRIOR TO PLACING WET CONCRETE.

HORIZONTAL CONSTRUCTION JOINTS:	CLEANED (A)	KEYED (B)
TOP OF CONCRETE WALLS	YES	YES
TOP OF FOOTINGS	YES	NO
TOP OF COLUMNS	YES	NO
BOTTOM OF CURBS, MACHINE BASES, PLANTER WALLS, BLOCK RAILINGS	NO	NO
WALL CONSTRUCTION JOINTS	YES	YES
VERTICAL CONSTRUCTION JOINTS:	**CLEANED (A)**	**KEYED (B)**
SLAB CONSTRUCTION JOINTS	NO	YES
SLAB CLOSURE STRIPS	NO	YES
MAT FOOTINGS CONSTRUCTION JOINT	YES	YES
CONTINUOUS WALL FTG'S/GRADE BEAMS	NO	YES
WALL CONSTRUCTION JOINTS	YES	YES
TIE BEAM TO PILE CAP	NO	NO
BEAM CONSTRUCTION JOINT	YES	YES
BEAM TO COLUMN JOINT	YES	YES

   (A) JOINTS INDICATED TO BE CLEANED, SHALL BE WATER BLASTED OR SAND BLASTED PRIOR TO PLACING FRESH CONCRETE.
   (B) JOINTS INDICATED TO BE KEYED, SHALL HAVE A 2x KEY(s) OR ROUGHENED TO 1/4" AMPLITUDE.

8. **PIPES:** PIPES OTHER THAN ELECTRICAL CONDUITS SHALL NOT BE EMBEDDED IN STRUCTURAL CONCRETE EXCEPT WHERE SPECIFICALLY APPROVED BY THE **ENGINEER.** MAXIMUM PIPE SIZE SHALL BE 1/4 OF THE SLAB THICKNESS AND LOCATED AT THE MID DEPTH. MINIMUM SPACING SHALL BE 3 TIMES THE PIPE DIAMETER. PIPES SHALL NOT IMPAIR THE STRENGTH OF THE MEMBER.
9. **WELDED WIRE FABRIC:** WELDED WIRE FABRIC SHALL CONFORM TO ASTM A82 AND A185.
10. **TEMPERATURE REINFORCEMENT:** SHALL HAVE A CLASS B LAP BUT NOT LESS THAN 18 INCHES, AND THE SPLICES IN ADJACENT BARS SHALL BE NOT LESS THAN 5 FEET APART, U.N.O.
11. **REBAR GRADES:** ALL LOW ALLOY STEEL SHALL BE NEW STOCK DEFORMED BARS CONFORMING TO ASTM A706 GRADE 60, UNLESS NOTED OTHERWISE. THE FOLLOWING REBAR TYPES MAY BE ASTM GRADE 60 LOW ALLOY, A706, OR A615, GRADE 60, AT CONTRACTORS OPTION
    (A) FOUNDATION REINFORCEMENT
    (B) SLAB-ON GRADE REINFORCEMENT
12. **REBAR COVER:** ALL DIMENSIONS SHOWING THE LOCATION OF REINFORCING STEEL NOT NOTED AS "CLEAR" ARE TO CENTER OF STEEL. MINIMUM REBAR COVER FOR NON-PRESTRESSED CONCRETE SHALL BE AS FOLLOWS.

DESCRIPTION	MINIMUM COVER	TOLERANCES (+ OR -)
SLABS ON GRADE	1.1/2"	1/4"
CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3"	3/8"
EXPOSED TO EARTH OR WEATHER: #5 AND SMALLER BARS	1.1/2"	3/8"
#6 AND LARGER BARS	2"	3/8"
NOT EXPOSED TO WEATHER OR IN CONTACT WITH THE GROUND: ROOF SLABS	1"	1/8"
STRUCTURAL SLABS AND WALLS	3/4"	1/8"
BEAMS AND COLUMNS (PRIMARY REINFORCEMENT, TIES, STIRRUPS AND SPIRALS)	1.1/2"	3/8"

13. **TOLERANCES FOR REBAR PLACEMENT:** TOLERANCES FOR LONGITUDINAL LOCATION OF BENDS AND ENDS OF REINFORCEMENT SHALL BE PLUS OR MINUS 2 INCHES EXCEPT AT DISCONTINUOUS ENDS OF MEMBERS WHERE TOLERANCES SHALL BE PLUS OR MINUS 1/2 INCH.
14. **CONCRETE QUALITY:**

CONCRETE USE	STRENGTH PSI @ 28 DAYS	FLY ASH SEE NOTE (C)	MAX. SLUMP	AIR	MAX. AGGREGATE SIZE	AGGREGATE TYPE
EXTERIOR WALKS AND CURBS ON GRADE	3000	N/A	4"	-	1"	HARDROCK
SLAB ON GRADE	4000	N/A	4"	-	1"	HARDROCK
CIP STAIRS	4000	N/A	4"	-	1"	HARDROCK
COLUMN FOOTINGS	4000 @ 90	30	4"	-	1"	HARDROCK
CONTINUOUS FOOTINGS	4000 @ 90	30	4"	-	1"	HARDROCK
SHEAR WALL FOOTINGS	4000 @ 90 DAYS	30	4"	-	1.1/2"	HARDROCK
COLUMNS	SEE ELEVATIONS	N/A	4"	-	3/4"	HARDROCK
SHEAR WALLS	5000	N/A	4"	-	1"	HARDROCK
PIERS	4000 @ 90	N/A	4"	-	3/4"	HARDROCK
SUSPENDED POST-TENSIONED SLABS & NON-DUCTILE BEAMS	2750 @ 3 5000 @ 56 SEE NOTE (B)	15	4"	3%	1"	HARDROCK (A)
SUSPENDED MILD-REINFORCED SLAB	5000 @ 56 DAYS	15	4"	-	1"	HARDROCK
MACHINE BASES	5000 @ 56 DAYS	N/A	4"	-	1"	HARDROCK
CONCRETE GUARD RAILS, PARAPET WALLS	4000	N/A	4"	-	1"	HARDROCK

   (A) HARDROCK AGGREGATE TYPE FOR SUSPENDED POST-TENSIONED SLABS: USE A LOW SHRINK AGGREGATE SUCH AS LIMESTONE, CLAYTON, GRANITE OR OTHER APPROVED AGGREGATE WITH A 35 DAY (TOTAL) DRY SHRINKAGE NOT GREATER THAN .04%.
   (B) WATER/CEMENT RATIO SHALL BE 0.45 OR LESS.
   (C) CLASS F FLY ASH IN PERCENT OF TOTAL CEMENTITIOUS MATERIAL
   N/A INDICATES THAT FLY ASH IS NOT REQUIRED, BUT MAY BE USED IN DESIGN MIXTURE.

15. **CURING:** MEMBRANE CURE ELEVATED SLAB CONTINUOUSLY FOR PERIOD NOT LESS THAN SEVEN (7) DAYS. SPRAY-ON CURING COMPOUND SHALL BE APPLIED IMMEDIATELY TO THE FRESH CONCRETE. MEMBRANE CURING SHALL BE COMPATIBLE WITH ANY SUBSEQUENT TREATMENT OF FINISH.
16. **CONCRETE:** ALL HARDROCK CONCRETE SHALL BE OF REGULAR WEIGHT OF 150 POUNDS PER CUBIC FOOT. ALL LIGHTWEIGHT CONCRETE SHALL BE 110 POUNDS PER CUBIC FOOT.
17. **AGGREGATE:** GRADATION OF AGGREGATE SHALL CONFORM TO LATEST EDITION OF ASTM C 33.

AGGREGATE SIZE	SIZE NUMBER
3/4"	67
1"	57
1.1/2"	467

18. **CEMENT:** SHALL BE TYPE II UNLESS NOTED OTHERWISE, AND SHALL BE ENTIRELY OF ONE MANUFACTURER.
19. **CONCRETE AGE:** NO MORE THAN 90 MINUTES SHALL ELAPSE BETWEEN CONCRETE BATCHING AND CONCRETE PLACEMENT UNLESS APPROVED BY TESTING AGENCY.
20. **WET SET:** REINFORCEMENT MAY NOT BE WET SET IN CONCRETE POURS.
21. **ROUGHENED SURFACES:** WHERE INDICATED ON THE DRAWINGS, ROUGHENED SURFACES SHALL BE PROVIDED BY MEANS OF HEAVY RAKING OR GROOVING. OTHER METHODS MAY BE ACCEPTABLE PENDING WRITTEN APPROVAL FROM THE **ENGINEER.** ALL INTERFACING SURFACES MUST BE CLEAN AND FREE OF LAITANCE.
22. **ADMIXTURES:** NO ADMIXTURES SHALL BE ADDED TO THE CONCRETE MIX WITHOUT THE APPROVAL OF THE **ENGINEER**, UNLESS NOTED OTHERWISE. FLY ASH SHALL BE ADDED TO THE CONCRETE MIX AS INDICATED IN THE CONCRETE QUALITY SCHEDULE UNDER NOTE #14. ADMIXTURES OR CONCRETE CONTAINING CHLORIDES SHALL NOT BE USED IN THE POST-TENSIONED SLABS.
23. **GAP TOLERANCE:** GAP TOLERANCE BETWEEN VERTICAL BAR AND TIES AT DUCTILE FRAME COLUMNS, GRAVITY COLUMNS. AND END OF WALL COLUMNS ARE AS FOLLOWS:
    - THE GAP TOLERANCE IS FOR CORNER VERTICALS AND THE PERIPHERAL HOOP, AND THE CROSSTIES AND VERTICAL BARS AT OTHER LOCATIONS. THIS DOES NOT APPLY TO BARS NOT RESTRAINED BY A CROSSTIE, EXCEPT AT THE CORNERS.
    - THE TYPICAL GAP SHALL NOT EXCEED 1/4".
    - GAPS UP TO A 1/2" ARE ACCEPTABLE AT A RANDOM BASIS. ONE IN FIVE WILL BE ACCEPTABLE FOR COLUMNS WITH CROSSTIES HAVING 180 DEGREE HOOKS AT EACH END. ONE IN EIGHT WILL BE ACCEPTABLE FOR COLUMNS WITH CROSSTIES HAVING 180 DEGREE HOOKS AT ONE END ONLY.
    - COLUMNS WITH EXCESSIVE GAPS SHALL HAVE ALTERNATING CROSSTIES PULLED TIGHT TO THE VERTICAL BAR. IF CONDITIONS OCCUR WHERE THE CROSSTIE HAS A 90 DEGREE HOOK AT ONE END, THE END WITH THE 135 OR 180 DEGREE HOOK SHALL BE THE SIDE PULLED TIGHT TO THE COLUMN VERTICAL.
24. **FIELD FOREMAN:** THE FIELD FOREMAN RESPONSIBLE FOR THE PLACEMENT OF ALL STRUCTURAL CONCRETE SHALL HAVE A MINIMUM OF (3) YEARS EXPERIENCE IN THIS CAPACITY FOR THIS TYPE OF CONSTRUCTION.

PRELIMINARY
FOR REVIEW PURPOSES ONLY

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GENERAL NOTES

MOUNTAIN VIEW PARKING STRUCTURE
MOUNTAIN VIEW, CALIFORNIA

REVISIONS

NO.	DATE	BY

02-24-05
80% WORKING DOCUMENTS

JOB NO	:	02044
DATE	:	02-24-05
DESIGN	:	J.A.McINERNEY
DRAWN	:	TY
CHECKED BY	:	BLIGH
FILE NAME	:	0244S11

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MASONRY NOTES

1. **CONCRETE MASONRY UNITS:** SHALL BE HOLLOW, SUITABLE FOR BEARING WALL CONSTRUCTION. ALL BLOCKS SHALL CONFORM TO GRADE N UNITS GIVEN IN ASTM C90, LATEST EDITION, AND IN ADDITION SHALL HAVE A LINEAR SHRINKAGE OF 0.065% MAXIMUM FROM SATURATED TO THE OVEN DRY CONDITION. MASONRY UNITS SHALL HAVE CURED FOR NOT LESS THAN (28) DAYS WHEN PLACED IN THE STRUCTURE. PROVIDE ALL BOND BEAM UNITS, LINTELS, ETC., AS REQUIRED.
2. **DEFECTIVE UNITS:** DO NOT USE CHIPPED OR CRACKED BLOCKS. IF ANY SUCH BLOCKS ARE DISCOVERED IN ANY FINISHING WALL, THEY SHALL BE PROMPTLY REMOVED AND REPLACED WITH NEW BLOCKS TO THE APPROVAL OF THE **ENGINEER.**
3. **MORTAR:** SHALL BE AS FOLLOWS:
   a)TYPE "S" WHEN F'm IS LESS THAN OR EQUAL TO 2,000 PSI
4. **GROUT:** GROUT SHALL DEVELOP THE MINIMUM SPECIFIED COMPRESSIVE STRENGTH. GROUT SHALL CONSIST OF CEMENTITIOUS MATERIALS, AGGREGATE, AND WATER SUCH THAT THE MIXTURE WILL FLOW WITHOUT SEGREGATION OF THE CONSTIT-UENTS. THE MAXIMUM COARSE AGGREGATE SIZE SHALL BE 3/8 INCH.
5. **ADMIXTURES:** THE USE OF ADMIXTURES SHALL NOT BE PERMITTED IN MORTAR OR GROUT UNLESS SUSTAINABLE DATA HAS BEEN SUBMITTED TO AND REVIEWED BY THE **ENGINEER**, AND APPROVED BY THE BUILDING OFFICIAL. EXCEPT: A SHRINKAGE COMPENSATING ADMIXTURE SUCH AS "SIKA GROUT AID TYPE I" IS REQUIRED FOR GROUT USED IN HIGH LIFT CONSTRUCTION. THE USE OF ADMIXTURES IN MORTAR SHALL NOT BE PERMITTED WITHOUT REDUCING THE LIME CONTENT. THE USE OF UNCONTROLLED FIRE CLAY, DIRT, AND DELETERIOUS MATERIALS IS PROHIBITED.
6. **MIXING:** PLACE THE SAND, CEMENT AND WATER IN THE MIXER IN THAT ORDER FOR EACH BATCH OF MORTAR OR GROUT AND MIX FOR A PERIOD OF AT LEAST 2 MINUTES. ADD THE LIME AND CONTINUE MIXING FOR AS LONG AS NEEDED TO SECURE A UNIFORM MASS, BUT IN NO CASE LESS THAN 10 MINUTES. USE MIXERS TO SECURE A UNIFORM CAPACITY. BATCHES REQUIRING FRACTIONAL SACKS WILL NOT BE PERMITTED UNLESS CEMENT IS WEIGHED FOR EACH SUCH BATCH. RETEMPER MORTAR ONLY BY ADDING WATER INTO A BATCH MADE WITH THE MORTAR AND THEN CAREFULLY WORKING THE WATER INTO THE MORTAR. RETEMPERING THE MORTAR BY DASHING WATER OVER THE MORTAR SHALL NOT BE PERMITTED. ANY MORTAR OR GROUT WHICH IS UNUSED WITHIN ONE HOUR AFTER THE INITIAL MIXING SHALL BE REMOVED FROM THE WORK. MORTAR SHALL BE MIXED AND MAINTAINED ON THE BOARDS TO A SLUMP OF 2-3/4 INCHES PLUS OR MINUS 1/4 INCH USING A TRUNCATED CONE 4 INCHES BY 2 INCHES; 6 INCHES HIGH.
7. **CEMENT:** SHALL BE PORTLAND CEMENT CONFORMING TO ASTM C150, TYPE I OR TYPE II, AND SHALL BE ENTIRELY OF ONE MANUFACTURE.
8. **WATER:** WATER USED FOR MORTAR AND GROUT SHALL BE CLEAN AND FREE FROM DELETERIOUS AMOUNTS OF ACIDS, SALTS, ALKALI, AND ORGANIC MATERIALS.
9. **AGGREGATES:** SAND FOR MORTAR SHALL CONFORM TO ASTM C144 EXCEPT THAT NOT LESS THAN 3% OF THE SAND SHALL PASS THE NUMBER 100 SEIVE. SAND AND PEA GRAVEL FOR GROUT SHALL CONFORM TO ASTM C404, TABLE I, COARSE AGGREGATE.
10. **QUICKLIME:** QUICKLIME SHALL CONFORM TO ASTM C5.
11. **CONSTRUCTION JOINTS:** WHEN GROUTING IS STOPPED FOR A PERIOD OF (1) HOUR OR LONGER, FORM HORIZONTAL CONSTRUCTION JOINTS BY STOPPING THE GROUT POUR 1.1/2 INCHES MINIMUM BELOW THE UPPER MOST UNIT.
12. **ALIGNMENT OF VERTICAL CELLS:** ALL MASONRY SHALL BE BUILT TO PRESERVE THE UNOBSTRUCTED VERTICAL CONTINUITY OF THE CELLS TO BE FILLED. THE VERTICAL ALIGNMENT SHALL BE SUFFICIENT TO MAINTAIN A CLEAR, UNOBSTRUCTED VERTICAL FLUE MEASURING NOT LESS THAN 3 INCHES.
13. **LAYING:** IN PLACING MORTAR IN HORIZONTAL JOINTS, COMPLETELY COVER THE FACE SHELLS OF THE UNITS WITH MORTAR. SOLIDLY FILL ALL HEAD JOINTS. LAY ALL MASONRY WITH COMMON OR RUNNING BOND. HOLD RAKING TO A MINIMUM.
14. **WALL CLEANING AND PROTECTION:** REMOVE CONCRETE SCUM AND GROUT STAINS ON THE WALL IMMEDIATELY. AFTER THE WALL IS CONSTRUCTED, DO NOT SATURATE WITH WATER FOR CURING OR ANY OTHER PURPOSE. CHECK ALL JOINTS FOR TIGHTNESS AND, WHERE CRACKS ARE VISIBLE, CHIP OUT THE MORTAR, TUCK POINT AND TOOL TO MATCH ADJACENT JOINING.
15. **REINFORCEMENT:** REINFORCEMENT SHALL BE FULLY EMBEDDED IN GROUT. SEE STRUCTURAL NOTES AND DETAILS FOR SIZE, GRADE, LAPS, ETC.
16. **GROUTING:** ALL WALLS SHALL HAVE ALL CELLS FILLED SOLID WITH GROUT.
17. **DOWELS:** ALL VERTICAL WALL REINFORCEMENT SHALL HAVE DOWELS EQUAL IN SIZE AND SPACING EMBEDDED INTO FOOTING UNLESS NOTED OTHERWISE ON THESE PLANS.
18. **MINIMUM COMPRESSIVE STRENGTH:** AT 28 DAYS SHALL BE AS LISTED BELOW:

DESIGN STRENGTH f'm (PSI)	BLOCK UNIT NET STRENGTH	GROUT STRENGTH	MORTAR TYPE	PRISM TEST(*)
STANDARD (1,500)	2,000	2,000	2,000	NO

(*) PRISM TESTS TO VERIFY F'm GREATER THAN 1500 PSI SHALL BE PERFORMED FOR EACH 5000 SQ.FT. OF THE ABOVE SPECIFIED WALLS, IN ACCORDANCE WITH UBC SECTIONS 1701 AND 2105

19. **MAXIMUM HEIGHT:** MAXIMUM HEIGHT OF ANY GROUT POUR SHALL NOT BE GREATER THAN 5 FEET UNLESS PROPER HIGH-LIFT PROCEDURES ARE USED.
20. **MASONRY REBAR LAP LENGTHS:** THE MINIMUM MASONRY REBAR LAP LENGTHS SHALL BE AS FOLLOWS, U.N.O.

BAR SIZE	#3	#4	#5	#6	#7	#8	#9	#10	#11
LAP LENGTH	21"	33"	41"	49"	57"	65"	74"	90"	99"

21. **REBAR GRADES:** ALL REINFORCING STEEL SHALL BE NEW STOCK DEFORMED BARS CONFORMING TO ASTM A615, GRADE 60.
22. **REINFORCING COVER:** 2 INCHES THROUGHOUT, U.N.O.
23. **WET SET:** REINFORCEMENT MAY NOT BE WET SET IN MASONRY AFTER GROUTING.
24. **FIELD FOREMAN:** THE FIELD FOREMAN RESPONSIBLE FOR ALL STRUCTURAL MASONRY CONSTRUCTION SHALL HAVE A MINIMUM OF (3) YEARS OF EXPERIENCE IN THIS CAPACITY FOR THIS TYPE OF WORK.

PRESTRESS NOTES

1. **P.T. STEEL QUALITY:** ONE SAMPLE OF EACH REEL SHALL BE TESTED BY AN APPROVED LABORATORY. TEST RESULTS SHALL BE SUBMITTED TO THE **ENGINEER** AND BUILDING DEPARTMENT BEFORE STRESSING OF TENDONS. POST-TENSIONING TENDONS SHALL BE STRESS RELIEVED OR LOW RELAXATION, AND SHALL CONFORM TO THE FOLLOWING:

DESCRIPTION	DATA
SEVEN WIRE STRAND ASTM DESIGNATION	A416
1/2" DIAMETER TENDON AREA	0.153 SQ.IN.
ULTIMATE STRENGTH (fpu)	270 KSI
JACKING STRESS (.8 fpu)	216 KSI 33.0 KIPS
ANCHORING STRESS (.70 fpu MAX.)	189 KSI 28.9 KIPS
EFFECTIVE DESIGN STRESS: STRESS RELIEVED LOW RELAXATION	 162 KSI 24.8 KIPS 175 KSI 26.8 KIPS (*)

(*) HIGHER VALUES MAY BE USED WHEN SUPPORTED BY CALCULATION. CALCULATIONS SHALL BE SUBMITTED TO THE **ENGINEER** FOR REVIEW.

2. **SHOP DRAWINGS:** SUPPLIER SHALL SUBMIT SHOP DRAWINGS PER GENERAL NOTE #16.
3. **CONTRACTOR SUBMISSIONS:** CONTRACTOR SHALL PREPARE FRICTION CALCULATIONS AND SHOP DRAWINGS OF TENDON LAYOUT, DEAD-END AND STRESSING-END ANCHORAGE DETAILS. A RECORD OF ALL JACKING FORCES AND FIELD-MEASURED ELONGATIONS SHALL BE SUBMITTED TO THE **ENGINEER.**
4. **TWISTING:** OR ENTWINING OF INDIVIDUAL WIRES OR STRANDS WITHIN A BUNDLE OR A BEAM SHALL NOT BE PERMITTED.
5. **ELONGATION TOLERANCE:** FIELD READINGS OF ELONGATIONS AND/OR STRESSING FORCES SHALL NOT VARY BY MORE THAN 7%.
6. **TENDON ENDS:** DO NOT BURN OFF TENDON ENDS UNTIL THE ENTIRE SLAB HAS BEEN SATISFACTORILY STRESSED. IT IS RECOMMENDED THAT THE CONTRACTOR WAIT 24 HOURS AFTER STRESSING TO BURN OFF TENDON ENDS. SPRAY ANCHORS WITH "RUSTOLEUM" PAINT AND INSTALL GREASE CAPS WITHIN THE FOLLOWING 24 HOURS PERIOD. GROUT RECESS WITH NON-SHRINK GROUT, U.N.O.
7. **PROFILES:** SHALL CONFORM TO CONTROLLING POINTS SHOWN ON THE DRAWINGS AND SHALL BE IN AN APPROXIMATE PARABOLIC DRAPE BETWEEN SUPPORTS, UNLESS NOTED OTHERWISE. LOW POINTS ARE AT MIDSPAN UNLESS NOTED OTHERWISE. HARPED TENDONS SHALL BE STRAIGHT BETWEEN CONTROL POINTS.
8. **TENDON ADJUSTMENTS:** SLIGHT DEVIATIONS IN THE SPACING OF THE SLAB TENDONS MAY BE PERMITTED WHEN REQUIRED TO AVOID OPENINGS, INSERTS AND DOWELS WHICH ARE SPECIFICALLY LOCATED. WHERE LOCATIONS OF TENDONS SEEM TO INTERFERE WITH EACH OTHER, ONE TENDON MAY BE MOVED HORIZONTALLY IN ORDER TO AVOID THE INTERFERENCE.
9. **CHLORIDES:** GROUT OR CONCRETE CONTAINING CHLORIDES SHALL NOT BE USED.
10. **PUMPED CONCRETE:** IF CONCRETE IS PLACED BY THE PUMPED METHOD, A HORSE SHALL BE PROVIDED TO SUPPORT THE HOSE. THE HOSE SHALL NOT BE ALLOWED TO RIDE ON THE TENDONS. THIS REQUIREMENT IS MANDATORY.
11. **CONCRETE PLACEMENT:** WHEN CONCRETE IS PLACED IN POST-TENSIONING SLABS, SPECIAL CARE SHALL BE TAKEN AT ALL COLUMN DROP PANELS AND TENDON ANCHORS
    - **(A)** INSERT PUMP HOSE INTO COLUMN DROP PANEL BELOW REINFORCEMENT AND FILL UNTIL CONCRETE "BUBBLES" THROUGH THE REINFORCEMENT AT THE TOP OF THE DROP PANEL.
    - **(B)** AFTER DROP PANEL IS FULL OF CONCRETE, PLACE CONCRETE ON TOP OF REINFORCING TO SPECIFIED SLAB THICKNESS.
    - **(C)** VIBRATE ADEQUATELY IN AND AROUND COLUMN DROP PANELS AND TENDON ANCHORS.
12. **CONCRETE CONSOLIDATION:** CONTRACTOR SHALL TAKE PRECAUTIONS TO ASSURE COMPLETE CONSOLIDATION AND DENSIFICATION OF CONCRETE BEHIND ALL POST-TENSIONING ANCHORAGES AND IN COLUMN DROP PANELS.
13. **BLOCKOUTS:** ALL POCKET OR BLOCKOUTS REQUIRED FOR ANCHORAGE SHALL BE ADEQUATELY REINFORCED SO AS NOT TO DECREASE THE STRENGTH OF THE STRUCT-URE. ALL POCKETS SHOULD BE WATERPROOFED SO AS TO ELIMINATE WATER LEAKAGE THROUGH OR INTO THE POCKET.
14. **DE-SHORING:** SLAB OR BEAM MAY BE DE-SHORED WHEN ALL TENDONS HAVE BEEN STRESSED, UNLESS SHORING IS REQUIRED TO CARRY FLOORS ABOVE.
15. **P.T. HARDWARE QUALITY:** ALL ANCHORAGES, COUPLERS, AND MISCELLANEOUS HARDWARE SHALL BE STANDARD AND APPROVED BY **GOVERNING AGENCIES** AND THE **ENGINEER.**
16. **ANCHOR BARS:** (2) #4 BARS BEHIND ALL ANCHORS. #4 BAR TO BE CONTINUOUS UNLESS NOTED OTHERWISE. SPLICES SHALL BE 24 INCHES MINIMUM AND STAGGERED.
17. **MINIMUM CHAIRING:** TENDONS SHALL BE SECURED TO A SUFFICIENT NUMBER OF POSITIONING DEVICES TO ENSURE CORRECT LOCATION DURING AND AFTER THE PLACING OF CONCRETE, AND SHALL BE SUPPORTED AT A MAXIMUM OF 3 FEET 6 INCHES ON CENTER. CHAIRS SHALL BE STAPLED TO FORM.
18. **SUPPORT BARS:** SUPPORT BARS LOCATED AT FACES OF DROP PANELS SHALL BE #6 OR GREATER. DROP CAPS GREATER THAN 4 FEET IN SIZE SHALL HAVE AN ADDITIONAL #6 OR GREATER SUPPORT BAR AT THE CENTER. THE MINIMUM SIZE OF OTHER SUPPORT BARS SHALL BE #4.
19. **INSERTS:** ALL INSERTS AND SLEEVES SHALL BE CAST IN PLACE WHENEVER POSSIBLE. DRILLED AND POWDER-DRIVEN FASTENERS WILL BE PERMITTED ONLY WHEN IT CAN BE SHOWN THAT THE INSERTS WILL NOT SPALL THE CONCRETE AND ARE LOCATED SO AS TO AVOID THE TENDONS AND ANCHORAGES.
20. **BANDING:** THE "BANDED" TENDON PLACEMENT PROCEDURE SHALL BE USED FOR THIS PROJECT.
21. **CONCRETE STRENGTH AT STRESSING FOR ALL SUSPENDED SLABS:** ALL POST-TENSIONED TENDONS (BEAMS, BANDED GROUPS, UNIFORMLY DISTRIBUTED, AND TEMPERATURE ₵ SHRINKAGE) SHALL BE STRESSED TO ONE HUNDRED PERCENT (100%) ELONGATION WHEN CONCRETE REACHES A STRENGTH OF F'c = 2750 PSI MINIMUM AND NO LATER THAN 84 HOURS AFTER PLACING OF CONCRETE. IN THE EVENT THAT THE CONCRETE DOES NOT REACH A STRENGTH OF F'c = 2750 PSI WITHIN 84 HOURS, STRESS EACH TENDON TO TWENTY PERCENT (20%) ELONGATION, AND THEN TO ONE HUNDRED PERCENT (100%) ELONGATION ONCE THE CONCRETE HAS REACHED A STRENGTH OF F'c = 2750 PSI.
22. **CALIBRATION:** THE STRESSING JACK-GAUGE-PUMP UNIT TO BE USED SHALL HAVE BEEN CALIBRATED WITHIN THIRTY (30) DAYS OF ITS USE.
23. **STRESSING SEQUENCE:** UNIFORMLY DISTRIBUTED TENDONS SHALL BE STRESSED BEFORE CONCENTRATED BEAM STRIP (BANDED) TENDONS, AND SLAB TENDONS SHALL BE STRESSED BEFORE BEAM TENDONS.
24. **PIPES:** PLASTIC OR METAL CONDUITS MAY BE EMBEDDED IN THE SLAB PROVIDING THAT THE FOLLOWING CRITERIA ARE MET:
    - **(A)** DIAMETER DOES NOT EXCEED ONE-QUARTER OF THE SLAB THICKNESS.
    - **(B)** CONDUITS GREATER THAN OR EQUAL TO 1" DIAMETER SHALL BE LOCATED WITHIN THE MIDDLE THIRD OF THE SLAB.
    - **(C)** CONDUITS SMALLER THAN 1" DIAMETER MAY BE LOCATED ANYWHERE WITHIN THE SLAB AS LONG AS THE MINIMUM COVER REQUIREMENTS ARE OBSERVED.
    - **(D)** CENTER TO CENTER SPACING OF THE CONDUITS IS NOT LESS THAN THREE (3) TIMES THE DIAMETER OF THE LARGEST CONDUIT.
    - **(E)** CONDUITS MUST NOT INTERRUPT THE POST-TENSIONED CABLES.
    - **(F)** COLUMN AREAS SHOULD BE AVOIDED.
    - **(G)** IT IS UNDESIRABLE TO HAVE EXCESS AMOUNTS OF CONDUIT ENTERING THE SLAB FROM ONE LOCATION. IF THIS CONDITION EXISTS, THE CONDUITS MUST BE FANNED OUT IMMEDIATELY.
25. **POST-TENSIONED SLAB REVIEW:** THE CABLES, REINFORCEMENT, AND EMBEDDED ITEMS IN A POST-TENSIONED SLAB SHALL BE REVIEWED BY THE **ENGINEER** OR HIS/HER REPRESENTATIVE PRIOR TO POURING THE CONCRETE. THE **ENGINEER** SHALL BE NOTIFIED AT LEAST 48 HOURS IN ADVANCE.
26. **CONCRETE COVER FOR PRESTRESSED CONCRETE:** THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR PRESTRESSED ₵ NON-PRESTRESSED REINFORCEMENT.

DESCRIPTION	MINIMUM COVER	TOLERANCES + OR -
CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3"	3/8"
EXPOSED TO EARTH OR WEATHER: SLABS	1"	1/8"
BEAM PRIMARY REINFORCEMENT	1.1/2"	3/8"
BEAM TIES	1.1/2"	3/8"
NOT EXPOSED TO WEATHER OR IN CONTACT WITH THE GROUND: SLABS	3/4"	1/8"
BEAM PRIMARY REINFORCEMENT	1.1/2"	3/8"
BEAM TIES	1"	1/4"

27. **FIELD FOREMAN:** THE FIELD FOREMAN RESPONSIBLE FOR THE PLACEMENT OF ALL POST-TENSIONING SHALL HAVE A MINIMUM OF (3) YEARS EXPERIENCE IN THIS CAPACITY FOR THIS TYPE OF CONSTRUCTION.

STEEL NOTES

1. **MEASUREMENTS:** VERIFY ALL MEASUREMENTS AT JOBSITE.
2. **COORDINATION:** STEEL WORK SHALL BE COORDINATED WHERE IT ADJOINS WITH OTHER CONSULTANTS WORK. VERIFY DETAILS OF ATTACHMENT, FITTINGS, ETC.
3. **MISCELLANEOUS FASTENINGS:** PROVIDE ALL LUGS, CLIPS, ANCHORS AND MIS-CELLANEOUS FASTENINGS NECESSARY FOR THE COMPLETE ASSEMBLY AND INSTALLATION OF STEEL.
4. **GROUTING OF COLUMN BASE PLATES:** PRECISION SUPPORT GROUT SHALL BE "MASTERFLOW 928", MANUFACTURED BY MASTER BUILDERS, SEE INSPECTION NOTES FOR SPECIAL INSPECTION REQUIREMENTS. OTHER PRODUCTS WILL ONLY BE ACCEPTABLE PROVIDING WRITTEN APPROVAL OF THE **ENGINEER** IS OBTAINED PRIOR TO BIDDING. ACCEPTANCE WILL BE GRANTED ONLY UPON SATISFACTORY EVIDENCE PROVING THAT THE SUBSTITUTE MATERIAL MEETS ALL OF THE FOLLOWING REQUIREMENTS:
    - **(A)** U.S. CORPS OF ENGINEERS CRD-C 621-80 "SPECIFICATIONS FOR NON-SHRINK GROUT"
    - **(B)** U.S. CORPS OF ENGINEERS CRD-C 611-80 "METHOD OF TEST FOR FLOW OF GROUT MIXTURES (FLOW CONE METHOD)"
    - **(C)** FREE OF GAS PRODUCING OR GAS RELEASING AGENTS.
    - **(D)** FREE OF OXIDIZING CATALYSTS.
    - **(E)** FREE OF INORGANIC ACCELERATORS, INCLUDING CHLORIDES.
    - **(F)** FREE OF ANY DISCLAIMERS RELATED TO ITS STATED PERFORMANCE.
5. **DISSIMILAR METALS:** PROTECT ALL DISSIMILAR METALS FROM GALVANIC CORROSION.
6. **WELDING:** PERFORM ALL WELDING IN ACCORDANCE WITH AWS CODE D 1.1-LATEST EDITION. WELDS NORMALLY EXPOSED TO VIEW IN THE FINISHED WORK SHALL BE UNIFORMALLY MADE AND GROUND SMOOTH. WHERE WELDING IS DONE IN PROXIMITY TO GLASS OR FINISHED SURFACES, SUCH SURFACES SHALL BE PROTECTED FROM DAMAGE DUE TO WELD SPARKS, SPATTER, OR TRAMP METAL.
7. **BOLTED, SCREWED, AND RIVITED CONNECTIONS:** PROVIDE WASHERS UNDER ALL HEADS AND NUTS BEARING ON WOOD. DRAW ALL NUTS TIGHT AND UPSET THREADS OF PERMANENT CONNECTIONS TO PREVENT LOOSENING. USE BEVELED WASHERS WHERE BEARING IS ON SLOPED SURFACES.
8. **CLEANING:** THOROUGHLY CLEAN ALL MILL SCALE, RUST, DIRT, GREASE AND OTHER FOREIGN MATTER FROM FERROUS METAL PRIOR TO ANY GALVANIZING, HOT PHOSPHATE TREATMENT OR PAINTING.
9. **PAINTING:** AFTER MATERIAL HAS BEEN PROPERLY CLEANED AND TREATED, APPLY SHOP PRIME COAT OF PAINT TO ALL SURFACES EXCEPT THOSE ENCASED IN CONCRETE OR MASONRY. APPLY ALL PAINT AS PER MANUFACTURER'S DIRECTIONS. SPOT PAINT ALL ABRASIONS AND FIELD CONNECTIONS AFTER ASSEMBLY. SHOP COAT SHALL BE DRY PRIOR TO SHIPMENT TO JOB SITE. UNLESS OTHERWISE SPECIFIED OR DIRECTED, DO NOT APPLY SHOP PRIME COATS OR ANY STENCILED OR PAINTED IDENTIFICATION MARKINGS TO ANY GALVANIZED SURFACES.
10. **GALVANIZING:** SHALL CONFORM TO ASTM A123 FOR ROLLED, PRESSED AND FORGED SHAPES, PLATES, BAR AND STRIP; A153 FOR HARDWARE ITEMS AND A385 FOR ASSEMBLED STEEL PRODUCTS. UNLESS OTHERWISE PERMITTED, DO ALL GALVANIZING AFTER FABRICATION, IN LARGEST SECTIONS PRACTIBLE. WHERE GALVANIZING IS REMOVED BY WELDING OR OTHER ASSEMBLY PROCEDURE, TOUCH UP ABRADED AREAS WITH MOLTEN ZINC OR ZINC-RICH PAINT
11. **MATERIALS:** STANDARD STRUCTURAL STEEL SHAPES, BARS ₵ PLATES SHALL BE ASTM A36. EXCEPT WIDE FLANGE COLUMN SHAPES WHICH SHALL BE ASTM A992.
12. **BOLTS:** SHALL CONFORM TO ASTM 307, GRADE A, UNLESS NOTED OTHERWISE.
13. **WELDER QUALIFICATION:** WELDERS SHALL BE QUALIFIED BY TEST AS PER AWS D1.1-LATEST EDITION STRUCTURAL WELDING CODE STEEL SECTION 5 QUALIFICATIONS ₵ SHALL BE CERTIFIED BY A QUALIFIED TESTING LABORATORY OR A REGISTERED ENGINEER KNOWLEDGEABLE IN WELDING CONSTRUCTION.
14. **WELDING:** ELECTRODES TO BE E70XX.
15. **PAINTED STUDS AND JOISTS:** ASTM A570 FOR 12, 14, AND 16 GAGE WITH A MINIMUM YIELD STRENGTH OF 50 KSI, ASTM A611 GRADE C FOR 18 AND 20 GAGE STUDS, JOISTS, BRIDGING, TRACK, END CLOSURES AND ACCESSORIES WITH A MINIMUM YIELD STRENGTH OF 33 KSI.
16. **GALVANIZED STUDS AND JOISTS:** ASTM A446 GRADE D FOR 12, 14, AND 16, GAGE WITH A MINIMUM YIELD STRENGTH OF 50 KSI, ASTM A446 GRADE A FOR 18 AND 20 GAGE STUDS, JOISTS, BRIDGING, TRACK, END CLOSURES AND ACCESSORIES WITH A MINIMUM YIELD STRENGTH OF 33 KSI.
17. **GALVANIZED DECKING:** SHALL BE PER ASTM A446
18. **SHOP DRAWINGS:** SHOP DRAWINGS SHALL SHOW DIMENSIONS, SIZES, THICKNESSES, GAGES, FINISHES, JOINING, ATTACHMENTS, AND RELATIONSHIP OF WORK TO ADJOINING CONSTRUCTION. WHERE WELDED CONNECTORS AND INSERTS ARE REQUIRED TO RECEIVE WORK, SHOP DRAWINGS SHALL SHOW EXACT LOCATIONS REQUIRED, AND ALL SUCH DRAWINGS SHALL BE FURNISHED TO THE TRADES RES-PONSIBLE FOR INSTALLING THE CONNECTORS OR INSERTS. SHOP DRAWINGS SHALL BE SUBMITTED TO THE **ENGINEER** FOR REVIEW PRIOR TO FABRICATION.
19. **STEEL FABRICATION:** ALL STRUCTURAL AND MISCELLANEOUS STEEL SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE A.I.S.C. SPECIFICATIONS FOR STEEL BUILDINGS, A.I.S.C.-CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS ₵ BRIDGES, LATEST EDITIONS.
20. **PIPE COLUMNS:** SHALL CONFORM TO ASTM A53, GRADE B, UNLESS OTHERWISE NOTED ON PLANS.
21. **STRUCTURAL TUBING:** SHALL CONFORM TO ASTM A500, GRADE B, UNLESS OTHER WISE NOTED.
22. **INSPECTION OF WELDS:** SEE INSPECTION NOTES ON THIS SHEET.
23. **FIELD FOREMAN:** THE FIELD FOREMAN RESPONSIBLE FOR THE ERECTION OF ALL STRUCTURAL STEEL SHALL HAVE A MINIMUM OF (3) YEARS EXPERIENCE IN THIS CAPACITY FOR THIS TYPE OF CONSTRUCTION.

STAIR AND ELEVATOR NOTES

1. **STAIR SUPPLIER:** SHALL BE RESPONSIBLE FOR THE DESIGN AND DETAILING OF ALL STAIR STRUCTURE INCLUDING CONNECTIONS TO THE BUILDING STRUCTURE. STAIR SUPPLIER SHALL SUBMIT DRAWINGS AND CALCULATIONS STAMPED BY A CALIFORNIA REGISTERED CIVIL ENGINEER TO THE **ARCHITECT, ENGINEER AND BUILDING DEPARTMENT** FOR APPROVAL PRIOR TO FABRICATION AND ERECTION.
2. **SLAB MOVEMENT:** STAIRS BETWEEN ELEVATED DECKS WITH SINGLE RUNS AND ALL STAIRS BETWEEN ALL ELEVATED DECKS AND GRADE SHALL ALLOW FOR SLAB MOVEMENT IN ALL DIRECTIONS EQUAL TO 1/4".
3. **ELEVATOR SUPPLIER:** SHALL SUBMIT SHOP DRAWINGS TO THE **ARCHITECT AND ENGINEER** FOR APPROVAL PRIOR TO ERECTION. SHOP DRAWINGS SHALL SHOW THE MAGNITUDE ₵ LOCATION OF ALL LOADS IMPOSED ON STRUCTURE.
4. **ANCHORAGE:** THE USE OF EXPANSION ANCHORS IN ELEVATED SLABS IS NOT ALLOWED WITHOUT PRIOR APPROVAL OF THE **ENGINEER.**

STRUCTURAL OBSERVATION

1. STRUCTURAL OBSERVATION SHALL BE PROVIDED IN ACCORDANCE WITH C.B.C. SECTION 1702. AND PRESTRESS NOTE #25.
2. **NOTIFYING THE ENGINEER:** THE **ENGINEER** SHALL BE NOTIFIED 48 HOURS PRIOR TO PLACING COVERINGS ON ALL WORK REQUIRING STRUCTURAL OBSERVATION AND OR SPECIAL INSPECTION.
3. **JOB-SITE VISITS:** BY **WATRY DESIGN, INC.** DOES NOT CONSTITUTE AN OFFICIAL INSPECTION. DURING FIELD VISITS BY **WATRY REPRESENTATIVES** ANY INFORMATION COMMUNICATED TO THE SPECIAL INSPECTOR OR CONTRACTORS IS UNDERSTOOD TO BE ADVISORY ONLY. IT SHALL NOT BE CONSTRUED TO SUPERSEDE THE RESPONSIBILITIES OF THE SPECIAL INSPECTORS AND CONTRACTORS TO INSURE THAT THE BUILDING IS CONSTRUCTED IN FULL CONFORMANCE WITH THE PLANS AND SPECIFICATIONS. NO DEVIATION FROM THE PLANS AND SPECIFICATIONS SHALL BE ALLOWED WITHOUT THE PRIOR WRITTEN APPROVAL OF **WATRY DESIGN, INC.**

EPOXY GROUTING OF STRUCTURAL REBAR AND ANCHOR BOLTS

1. EPOXY GROUTED BARS SHALL BE USED ONLY WITH THE SPECIFIC APPROVAL OF THE **STRUCTURAL ENGINEER.**
2. EPOXY: USE INJECTED POWER-FAST EPOXY INJECTION GEL (ICBO ER 4514) OR HILTI HIT DOWELLING ANCHOR SYSTEM OR APPROVED EQUAL.
3. THE ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
4. ANCHORS SHALL NOT BE SUBJECTED TO VIBRATORY OR SHOCK LOADS UNLESS THEIR ADEQUACY IS DETERMINED BY TESTS AND APPROVED BY THE **LOCAL BUILDING OFFICIALS.**
5. THE EPOXY ANCHORS CAN NOT BE USED TO SUPPORT FIRE-RESISTIVE CONSTRUCTION.
6. THOROUGHLY CLEAN ALL HOLES WITH BRISTLE BRUSH AND COMPRESSED AIR PRIOR TO PLACING EPOXY.
7. THE EPOXY ANCHORS CAN NOT BE USED TO RESIST PULL-OUT FORCES IN OVERHEAD INSTALLATIONS.
8. SPECIAL INSPECTION MUST BE PROVIDED FOR ALL ANCHOR / REBAR INSTALLATION.
9. THE RESIN MUST BE ALLOWED TO CURE AT A TEMPERATURE BETWEEN 32° F AND 100° F FOR A MINIMUM OF 24 HOURS BEFORE LOADING THE STUD.
10. INSTALLATION IS NOT ALLOWED IN MASONRY MORTAR JOINTS.
11. THE CONCRETE SHALL HAVE ATTAINED ITS MINIMUM DESIGN STRENGTH, AND A MINIMUM AGE OF 14 DAYS PRIOR TO INSTALLATION OF THE ANCHORS. FOR MINIMUM CONCRETE STRENGTH REQUIRED FOR EXPOXING REBAR, SEE MANUFACTURER'S RECOMMENDATION.
12. PROOF TEST THE FIRST TEN (10) BOLTS/REBAR, THEN EVERY FOURTH BOLT/REBAR THERE AFTER IN ACCORDANCE WITH THE FOLLOWING SCHEDULE:

TENSION PROOF LOADS

BOLTS DIAMETER	BOLTS LOAD (LBS)	GRADE 60 REBAR SIZE	GRADE 60 REBAR LOAD (LBS)	DRILL BIT DIA. INCHES	HOLE DEPTH CONCRETE f'c 3000 psi	4000 psi	5000 psi
1/2"φ	1900	#4	6000	5/8"	10"	10"	10"
5/8"φ	3000	#5	9000	3/4"	12"	12"	12"
3/4"φ	4500	#6	12000	7/8"	15"	15"	15"
7/8"φ	6400	#7	12000	1"	20"	18"	16"
1"φ	6400	#8	15000	1.1/8"	28"	24"	22"
1.1/8" φ	6400	#9	20000	1.5/16"	36"	32"	28"
1.1/4" φ	6400	#10	20000	1.3/8"	36"	32"	28"

PIER NOTES

1. **PIER GROUPS:** EACH PIER IN A GROUP SHALL BE DRILLED AND POURED AND ALLOWED TO CURE FOR AT LEAST (24) HOURS BEFORE THE NEXT PIER IN THE GROUP IS DRILLED.
2. **DRILLING FLUIDS:** THE HOLE SHALL BE DRILLED FOR THE PIER TO THE DEPTH REQUIRED WITHOUT DRILLING FLUIDS.
3. **CLEANING:** THE BOTTOM OF ALL PIER EXCAVATIONS SHALL BE THOROUGHLY CLEANED OF LOOSE MATERIAL AND FREE OF WATER BEFORE PLACING REINFORCING STEEL AND CONCRETE. THEREFORE, CLEANING OF PIERS MAY REQUIRE HAND REMOVAL OF EXCESS MATERIAL.
4. **CASING:** CASING OF THE DRILLED HOLE SHALL BE INSTALLED AS REQUIRED TO PREVENT CAVING OF THE SOIL, AND AS REQUIRED BY OSHA FOR PERSONS ENTERING PIERS. REMOVE THE CASINGS AS THE LEVEL OF CONCRETE RISES.
5. **CONCRETE PLACEMENT:** PLACE CONCRETE IN PIERS THRU HOPPER OR EQUIVALENT SO THAT THE FALL OF THE CONCRETE IS VERTICAL DOWN THE SHAFT, AND DOES NOT HIT THE SIDES OR REINFORCEMENT.
6. **FIELD FOREMAN:** THE FIELD FOREMAN RESPONSIBLE FOR LOCATING AND PLACING PIERS SHALL HAVE A MINIMUM OF (3) YEARS EXPERIENCE IN THIS CAPACITY FOR THIS TYPE OF CONSTRUCTION.

INSPECTION NOTES

1. **GENERAL:** ANY INSPECTIONS, SPECIAL OR OTHERWISE, THAT ARE REQUIRED BY THE BUILDING CODES, LOCAL BUILDING DEPARTMENTS, OR THESE PLANS, SHALL BE DONE BY AN INDEPENDENT INSPECTION COMPANY. JOB SITE VISITS BY THE ENGINEER DO NOT CONSTITUTE AN OFFICIAL INSPECTION, UNLESS SPECIFIC-ALLY CONTRACTED FOR.
2. **SPECIAL INSPECTIONS:** IN ADDITION TO THE INSPECTIONS REQUIRED BY SECTION 108 OF THE C.B.C., THE OWNER SHALL EMPLOY A SPECIAL INSPECTOR DURING CONSTRUCTION ON THE FOLLOWING TYPES OF WORK. ALL SPECIAL INSPECTIONS SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 1701 OF THE C.B.C..
3. **CONCRETE:** DURING THE TAKING OF TEST SPECIMENS AND PLACING OF ALL REINFORCED CONCRETE AND PNEUMATICALLY PLACED CONCRETE.
4. **REINFORCING STEEL AND PRESTRESSING STEEL:**
    - **(A)** DURING ALL STRESSING AND GROUTING OF PRESTRESSED AND POST-TENSIONED CONCRETE. THE SPECIAL INSPECTION SHALL INCLUDE RECORDING OF FIELD MEASURED ELONGATION FOR EACH TENDON, AND A JACKING FORCE FOR EVERY 10TH TENDON.
    - **(B)** DURING THE PLACING OF REINFORCING STEEL, AND PRESTRESSING TENDONS. TENDON PLACEMENT AND INTEGRITY OF THE PROTECTIVE WRAPPING FOR POST-TENSIONED TENDONS SHALL BE INSPECTED PRIOR TO PLACEMENT OF CONCRETE.
    - **(C)** DURING ALL POST-TENSIONING, INSPECT THE TRIMMING AND CAPPING OF TENDONS PRIOR TO GROUTING RECESSES.
5. **DRILLED PIERS:** CONSTRUCTION OF CAST-IN-PLACE DRILLED PIERS, ALL SPECIAL INSPECTIONS REQUIRED FOR PLACEMENT OF CONCRETE AND STEEL REINFORCEMENT SHALL APPLY.
6. **WELDING:** DURING ALL STRUCTURAL WELDING, INCLUDING WELDING OF STEEL REINFORCEMENT.
7. **INSPECTION OF WELDS:** MUST FOLLOW THE CONDITIONS BELOW.
    - **(A)** THE SPECIAL INSPECTOR SHALL PRE-QUALIFY WELDERS BEFORE WORK COMMENCES ON ALL WELD TYPES.
    - **(B)** CONTINUOUS INSPECTION DURING THE WELDING OPERATION IS REQUIRED FOR ALL WELD TYPES. FOR EXCEPTIONS SEE THE FOLLOWING CONDITIONS:
        1. SINGLE PASS FILLET WELDS NOTED ON THE DRAWINGS AS "PERIODIC INSPECTION O.K."
    - **(C)** PERIODIC INSPECTION WHEN PERMITTED SHALL BE AS FOLLOWS:
        1. ALL WELDS SHALL BE VISUALLY INSPECTED.
        2. 50 PERCENT OF THE WELDS PERFORMED BY EACH WELDER ON THEIR FIRST DAY SHALL BE CONTINUOUSLY INSPECTED.
    - **(D)** COMPLETE PENETRATION WELDS REQUIRE 100 PERCENT NON-DESTRUCTIVE TESTING EITHER BY ULTRASONIC TESTING OR BY RADIOGRAPHY. THE NON-DESTRUCTIVE TESTING MAY BE REDUCED TO 25 PERCENT IF A MINIMUM OF 40 WELDS OF A WELDER PASS WITH A REJECTION RATE EQUAL TO OR LESS THAN 5 PERCENT. THE PRECEDING REDUCTION IS BASED ON THE PERFORMANCE OF A SPECIFIC WELDER, AND THE REDUCTION IN NON-DESTRUCTIVE TESTING ONLY APPLIES TO HIS/HER WORK.
    - **(E)** BASE METAL THICKER THAN 1.1/2 INCHES, WHEN SUBJECTED TO THROUGH-THICKNESS WELD SHRINKAGE STRAINS, SHALL BE ULTRASONICALLY INSPECTED FOR DISCONTINUITIES DIRECTLY BEHIND SUCH WELDS AFTER JOINT COMPLETION. THIS INSPECTION SHALL BE PERFORMED ON ALL SUCH JOINTS, REGARDLESS OF WELDER REJECTION RATE.
    - **(F)** ULTRASONIC TESTING TO BE CONDUCTED BY AN INDIVIDUAL WITH ASNT LEVEL II QUALIFICATION
    - **(G)** ALL DISCONTINUITIES AND LAMINATIONS TO BE NOTED IN A WRITTEN REPORT
    - **(H)** NO REPAIRS OF THE UT FAILED SPECIMENS SHALL BE ATTEMPTED WITHOUT PRIOR APPROVAL. ALTERNATIVELY, SPECIFY THE METHOD OF REPAIR, I.E. GOUGE OUT THE WELD AREAS WHERE DISCONTINUITIES OCCUR, SMOOTH AIR-ARCHED SURFACES, REWELD AND RETEST. WELDING OVER THE DISCONTINUITIES IS NOT PERMITTED, REGARDLESS OF THEIR CLASSIFICATIONS.
8. **HIGH-STRENGTH BOLTING:** DURING ALL BOLT INSTALLATIONS AND TIGHTENING OPERATIONS FOR SLIP CRITICAL CONNECTIONS.
9. **GROUTING OF COLUMN BASE PLATES:** SPECIAL INSPECTION SHALL BE PROVIDED FOR ALL BASE PLATES 1.1/2" THICK OR GREATER.
10. **STRUCTURAL MASONRY:** DURING PREPARATION OF MASONRY WALL PRISMS, SAMPLING AND PLACING OF ALL MASONRY UNITS, PLACEMENT OF REINFORCEMENT, INSPECTION OF GROUT SPACE IMMEDIATELY PRIOR TO CLOSING OF CLEANOUTS, AND DURING ALL GROUTING OPERATIONS. EXCEPTION; SPECIAL INSPECTION NEED NOT BE PROVIDED FOR STRUCTURES DESIGNED IN CONFORMANCE FOR NON-CONTINUOUS INSPECTION AND SO NOTED ON THESE PLANS.
11. **SPECIAL GRADING, EXCAVATION AND FILLING:** DURING EARTHWORK EXCAVATIONS, GRADING AND FILLING OPERATIONS IN ACCORDANCE WITH CHAPTER 18 ₵ APPENDIX CHAPTER 33 OF THE C.B.C..
12. **SELECTION OF SPECIAL INSPECTOR:** **THE CITY** SHALL SUBMIT TO THE **ENGINEER** A LIST OF (3) FIRMS CHOSEN TO PERFORM THE SPECIAL INSPECTION DUTIES. THE SPECIAL INSPECTION FIRM SHALL HAVE AT LEAST (5) YEARS OF EXPERIENCE IN THE WORK TO BE INSPECTED. THE ENGINEER SHALL RECOMMEND ONE FIRM FROM THOSE SUBMITTED.
13. **FIELD FOREMAN:** ALL FIELD INSPECTORS SHALL HAVE A MINIMUM OF (1) YEAR EXPERIENCE IN THE SPECIFIC CONSTRUCTION BEING INSPECTED.

DEFERRED SUBMITTAL ITEMS

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND COORDINATING DESIGN AND DETAILING OF THE FOLLOWING PRE-ENGINEERED SYSTEMS, INCLUDING CONNECTIONS TO THE BUILDING STRUCTURE. THE CONTRACTOR SHALL SUBMIT DRAWINGS AND CALCULATIONS STAMPED BY A CALIFORNIA REGISTERED CIVIL OR STRUCTURAL ENGINEER TO THE **ARCHITECT, ENGINEER AND BUILDING DEPARTMENT** FOR APPROVAL PRIOR TO FABRICATION AND ERECTION.

DEFERRED ITEMS INCLUDE BUT ARE NOT LIMITED TO:
1. METAL STAIRS
2. ELEVATORS
3. EXTERIOR CLADDING SYSTEMS
4. INTERIOR TENANT IMPROVEMENTS
5. ROOF TRELLIS
6. WINDOW WASHING SYSTEMS
7. CANOPIES
8. METAL STUD WALL SYSTEMS
9. WINDOW WALL SYSTEMS

INSPECTION REQUIREMENT

REINFORCED CONCRETE,GUNITE,GROUT ₵ MORTAR

CONCRETE	GUNITE	GROUT	MORTAR	
				AGGREGATE TESTS
				REINFORCING TESTS
X				MIX DESIGNS
X		X	X	REINF. PLACEMENT
* X				BATCH PLANT INSP.
X		X	X	INSPECT PLACING
X		X	X	CAST SAMPLES
X		X	X	PICK-UP SAMPLES
X		X	X	COMPRESSION TESTS

* FIRST BATCHES FOR EACH P.T. SLAB POUR

STRUCTURAL STEEL/WELDING

- ___ SAMPLE AND TEST(LIST SPECIFIC MEMBERS BELOW)
- X SHOP MATERIAL IDENTIFICATION
- X WELDING INSPECTION [X]SHOP [X]FIELD
- X ULTRASONIC INSPECTION [X]SHOP [X]FIELD
- X HIGH-STRENGTH BOLTING INSPECTION [ ]SHOP [ ]FIELD
  [X] A325
  [ ] A490 [ ] N [ ] X [ ] F
- X METAL DECK WELDING INSPECTION
- X REINFORCING STUD WELDING INSPECTION
- X METAL STUD WELDING INSPECTION
- X CONCRETE INSERT WELDING INSPECTION

PRECAST/PRESTRESSED CONCRETE

PILES	POST-TENS.	PRE-TENS.	CLAD-DING	
				AGGREGATE TESTS
				REINFORCING TESTS
	X			TENDON TESTS
	X			MIX DESIGNS
	X		X	REINF. PLACEMENT
				INSERT PLACEMENT
				CONCRETE BATCHING
	X			CONCRETE PLACEMENT
				INSTALLATION INSP.
	X		X	CAST SAMPLES
	X		X	PICK-UP SAMPLE
	X		X	COMPRESSION TESTS

FIREPROOFING

- ___ PLACEMENT
- ___ DENSITY TESTS
- ___ THICKNESS TESTS
- ___ INSPECT BATCHING

INSULATING CONCRETE

- ___ SAMPLE AND TEST
- ___ PLACEMENT INSPECTION
- ___ UNIT WEIGHTS

FILL MATERIAL

- X ACCEPTANCE TESTS
- X PLACEMENT INSPECTION
- X FIELD DENSITY

MASONRY

- X SPECIAL INSPECTION
- ___ PRELIMINARY ACCEPTANCE TESTS(MASONRY UNITS, WALL PRISMS)
- X SUBSEQUENT TESTS(MORTAR, GROUT)
- X PLACEMENT INSPECTION OF UNITS

STRUCTURAL WOOD

- ___ SHEAR WALL NAILING INSPECTION
- ___ INSPECTION OF GLU-LAM FAB.
- ___ INSPECTION OF TRUSS JOIST FAB.
- ___ SAMPLE AND TEST COMPONENTS

OTHER TEST, INSPECTIONS, OR SPECIAL INSTRUCTIONS

- X EPOXY GROUTED REBAR ₵ EXPANSION ANCHORS WHEN REQUIRED FOR FIELD CONDITIONS
- X DURING ALL POST-TENSIONING, INSPECT THE TRIMMING ₵ CAPPING OF TENDONS PRIOR TO GROUTING RECESSES

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GENERAL NOTES

MOUNTAIN VIEW PARKING STRUCTURE
MOUNTAIN VIEW, CALIFORNIA

REVISIONS

NO.	DATE	BY

02-24-05
80% WORKING DOCUMENTS

JOB NO	:	02044
DATE	:	02-24-05
DESIGN	:	J.A.McINERNEY
DRAWN	:	TY
CHECKED BY	:	BLIGH
FILE NAME	:	0244S12

SHEET
S1.2

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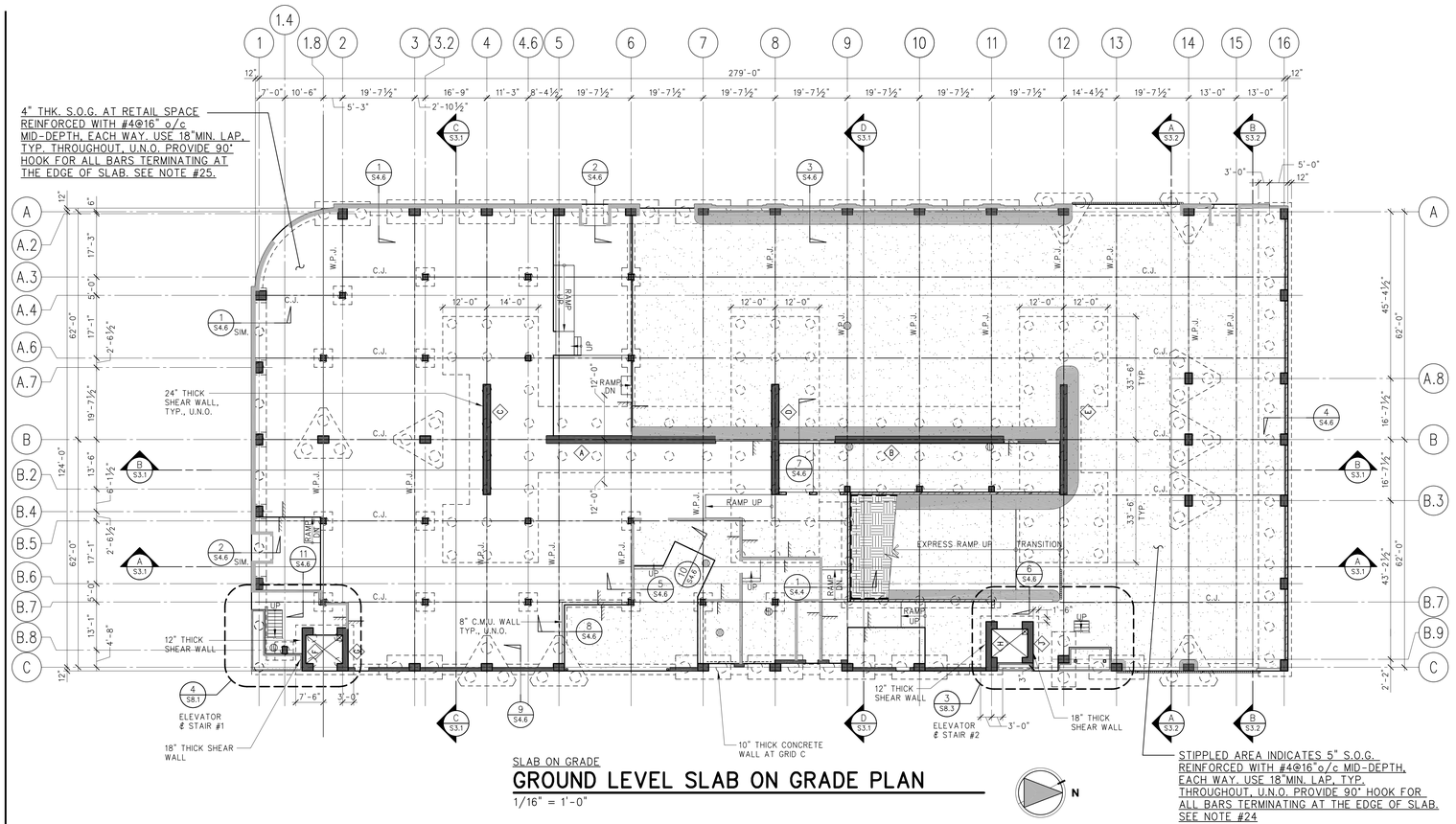
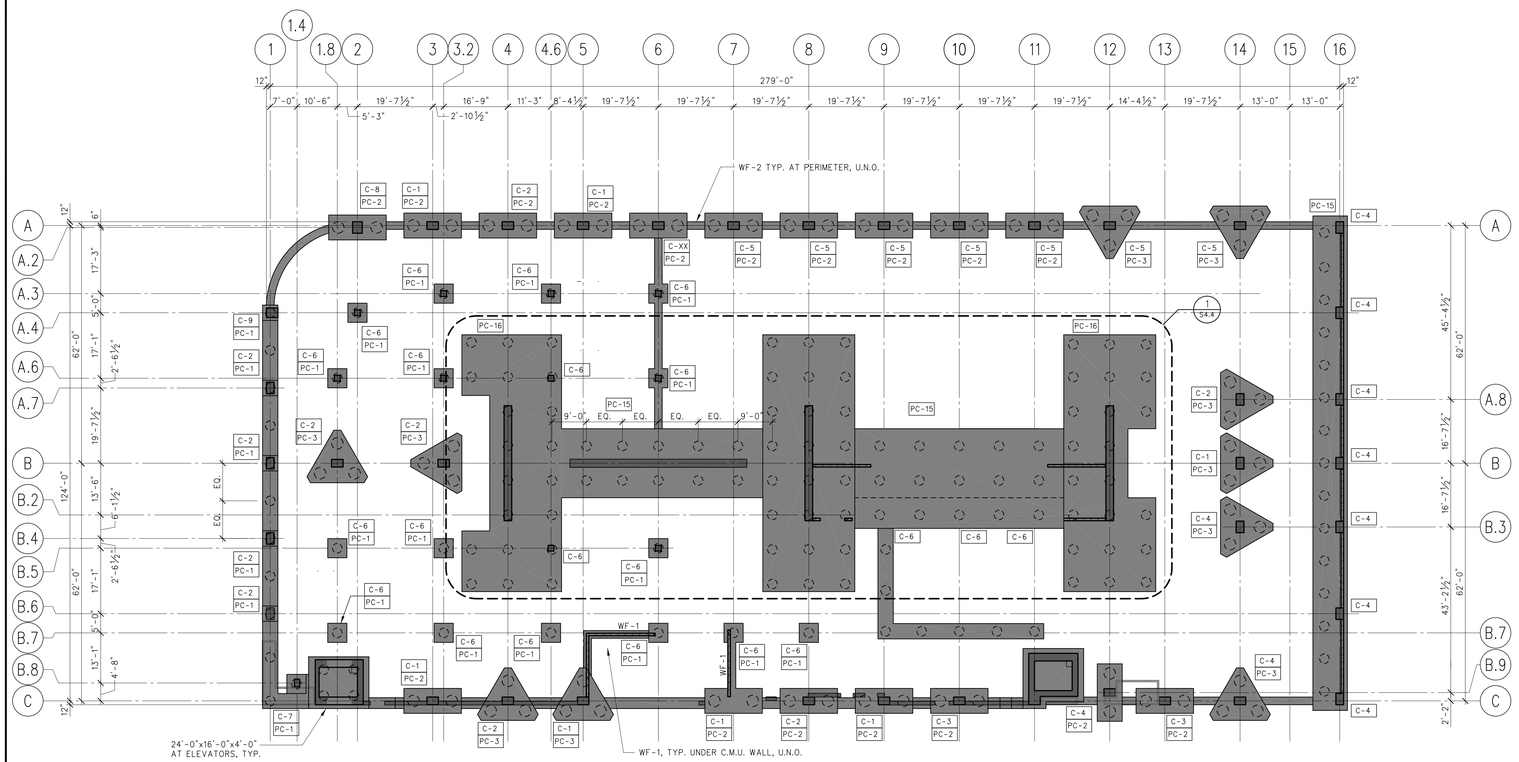


SLAB ON GRADE

GROUND LEVEL SLAB ON GRADE PLAN

1/16" = 1'-0"



FOUNDATION LAYOUT

GROUND LEVEL FOUNDATION PLAN

SCALE : 1/16" = 1'-0"

FOUNDATION NOTES

1. VERIFY ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS.
2. FOR TYPICAL BAR BENDING, SEE DETAIL 1/S4.1
3. FOR REBAR TENSION LAP SPLICES AND ANCHORAGE REQUIREMENTS, SEE SCHEDULE ON SHEET S4.1
4. FOR TYPICAL WELDING SPLICE, SEE DETAIL 2/S4.1
5. FOOTING INTERSECTIONS AND CORNERS ARE TO BE PER DETAIL 17/S4.1
6. FOR PIPE AND TRENCH CLEARANCE AT FOOTINGS, SEE DETAIL 8/S4.1
   CAUTION: IT MAY, IN SOME CASES, BE NECESSARY TO INCREASE THE FOOTING DEPTHS, SEE PLUMBING DRAWINGS FOR ANY CONFLICTS.
7. FOR THICKENED SLAB FOR PIPE OR CONDUIT, SEE DETAIL 9/S4.1
8. STEPPED FOOTINGS ARE TO BE PER DETAIL 10/S4.1 TYP., U.N.O.
9. FOOTING CONSTRUCTION JOINTS ARE TO BE PER DETAIL 11/S4.1
10. WALL OPENINGS ARE TO BE TRIMMED WITH ADDED REINF. PER DETAIL 14/S4.1
11. CONCRETE STAIRS-ON-GRADE ARE TO BE PER DETAIL 16/S4.1
12. FOR GRADE BEAM INTERSECTION THROUGH SPREAD FOOTING, SEE DETAIL 1/S4.3
13. S.O.G. EQUIPMENT PADS ARE TO BE PER DETAIL 3/S4.4 SIM.
14. TYPICAL CURB TO BE PER DETAIL 3/S4.4 IN S.O.G.
15. TYPICAL STEP IN S.O.G. TO BE PER DETAILS 19/S4.1 & 20/S4.1
16. GRADE BEAM SIZE TRANSITIONS TO BE PER DETAILS 8/S4.3 & 9/S4.3
17. ANY REQUIRED SLAB-ON-GRADE CONSTRUCTION JOINTS ARE TO BE PER DETAIL 12/S4.1
18. ANY REQUIRED SLAB-ON-GRADE WEAKENED PLANE JOINTS ARE TO BE PER DETAIL 13/S4.1
19. ALL C.M.U. WALLS SHALL BE PRECISION BLOCK, TYP. U.N.O. VERIFY w/ ARCH. DWGS.
20. FOR GAP TOLERANCE, SEE DETAIL 21/S4.2
21. FOR BENT BAR ANCHOR BOLTS, SEE DETAIL 7/S4.1
22. FOR BAR WELDING TO PLATES, SEE DETAIL 6/S4.1
23. FOR EDGE OF SLAB ON GRADE, SEE DETAIL
24. S.O.G. REQUIREMENTS: S.O.G. SHALL BE UNDERLAIN BT AT LEAST 6" OF CLASS 2 AGGREGATE BASE COMPACTED TO AT LEAST 90% RELATIVE COMPACTION (ASTM D1557). SEE GEOTECHNICAL REPORT REFERENCED IN FOUNDATION NOTE #1.
25. RETAIL S.O.G. SHALL BE UNDERLAIN BY 2" SAND OVER A MINIMUM 10-MIL-THICK VAPOR BARRIER OVER AT LEAST 4 INCHES OF FREE DRAINING GRAVEL OVER AT LEAST 12 INCHES OF NON-EXPANSIVE FILL. SEE GEOTECHNICAL REPORT REFERENCED IN FOUNDATION NOTE #1 ON SHEET S1.1.

LEGEND

- C-1 / PC-1 — INDICATES CONCRETE COLUMN TYPE, SEE SCHEDULE ON SHEET S4.2 AND DETAILS 24 & 25
- INDICATES PIER CAP TYPE, SEE DETAIL 8/S4.3 SEE SCHEDULES ON SHEET S4.3
- A — INDICATES SHEAR WALL TYPE, SEE ELEVATIONS ON SHEET S5.2
- DETAIL
- S4.3A
- IL
- GS
- FOR LOCATION & SLOPE
- INDICATES C.M.U. WALLS, SEE DETAILS 21, 22, 24 & 25

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GROUND LEVEL FOUNDATION PLAN

MOUNTAIN VIEW PARKING STRUCTURE

MOUNTAIN VIEW, CALIFORNIA

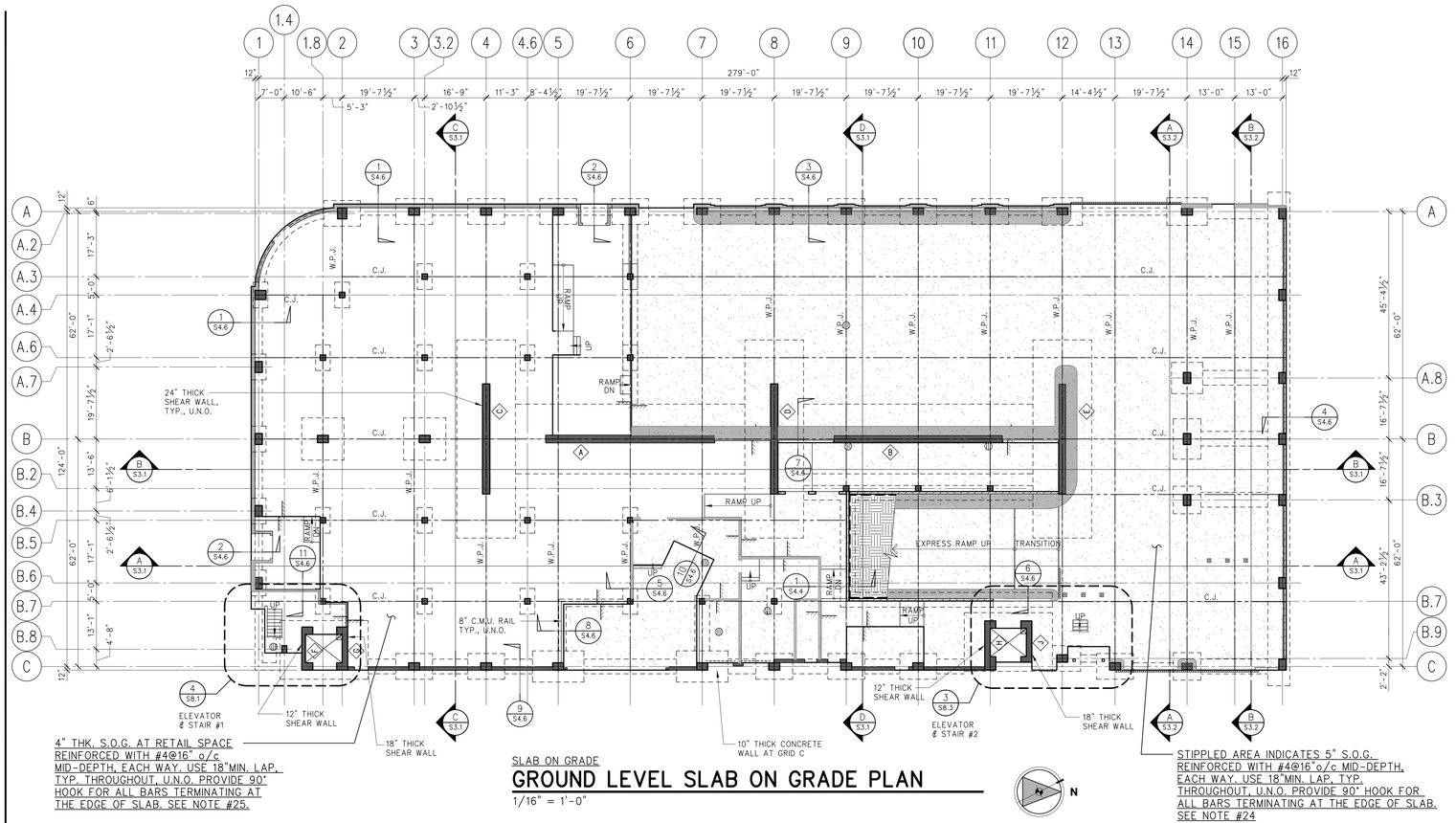
REVISIONS		
NO.	DATE	BY

02-24-05
80% WORKING DOCUMENTS

JOB NO	:	02044
DATE	:	02-24-05
DESIGN	:	J.A.McINERNEY
DRAWN	:	TY
CHECKED BY	:	BLIGH
FILE NAME	:	0244S21

SHEET

S2.1



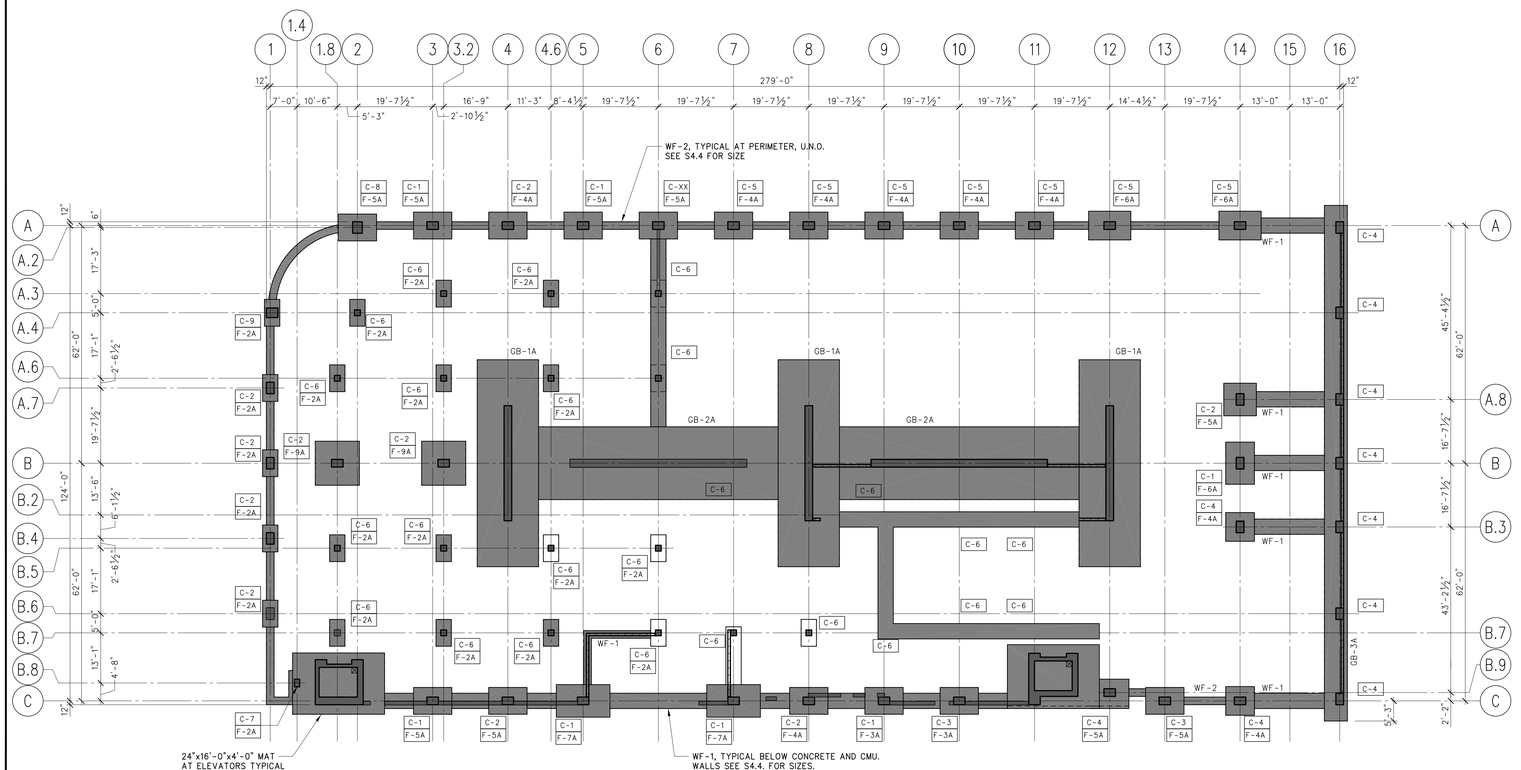
4" THK. S.O.G. AT RETAIL SPACE REINFORCED WITH #4@16" o/c MID-DEPTH, EACH WAY. USE 18"MIN. LAP, TYP. THROUGHOUT, U.N.O. PROVIDE 90° HOOK FOR ALL BARS TERMINATING AT THE EDGE OF SLAB. SEE NOTE #25.

STIPPLED AREA INDICATES 5" S.O.G. REINFORCED WITH #4@16"o/c MID-DEPTH, EACH WAY. USE 18"MIN. LAP, TYP. THROUGHOUT, U.N.O. PROVIDE 90° HOOK FOR ALL BARS TERMINATING AT THE EDGE OF SLAB. SEE NOTE #24

SLAB ON GRADE

GROUND LEVEL SLAB ON GRADE PLAN

1/16" = 1'-0"



FOUNDATION LAYOUT

GROUND LEVEL FOUNDATION PLAN

SCALE : 1/16" = 1'-0"

FOUNDATION NOTES

1. VERIFY ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS.
2. FOR TYPICAL BAR BENDING, SEE DETAIL 1/S4.1
3. FOR REBAR TENSION LAP SPLICES AND ANCHORAGE REQUIREMENTS, SEE SCHEDULE ON SHEET S4.1
4. FOR TYPICAL WELDING SPLICE, SEE DETAIL 2/S4.1
5. FOOTING INTERSECTIONS AND CORNERS ARE TO BE PER DETAIL 17/S4.1
6. FOR PIPE AND TRENCH CLEARANCE AT FOOTINGS, SEE DETAIL 8/S4.1
   CAUTION: IT MAY, IN SOME CASES, BE NECESSARY TO INCREASE THE FOOTING DEPTHS, SEE PLUMBING DRAWINGS FOR ANY CONFLICTS.
7. FOR THICKENED SLAB FOR PIPE OR CONDUIT, SEE DETAIL 9/S4.1
8. STEPPED FOOTINGS ARE TO BE PER DETAIL 10/S4.1 TYP., U.N.O.
9. FOOTING CONSTRUCTION JOINTS ARE TO BE PER DETAIL 11/S4.1
10. WALL OPENINGS ARE TO BE TRIMMED WITH ADDED REINF. PER DETAIL 14/S4.1
11. CONCRETE STAIRS-ON-GRADE ARE TO BE PER DETAIL 16/S4.1
12. FOR GRADE BEAM INTERSECTION THROUGH SPREAD FOOTING, SEE DETAIL 1/S4.3
13. S.O.G. EQUIPMENT PADS ARE TO BE PER DETAIL 3/S4.4 SIM.
14. TYPICAL CURB TO BE PER DETAIL 3/S4.4 IN S.O.G.
15. TYPICAL STEP IN S.O.G. TO BE PER DETAILS 19/S4.1 & 20/S4.1
16. GRADE BEAM SIZE TRANSITIONS TO BE PER DETAILS 8/S4.3 & 9/S4.3
17. ANY REQUIRED SLAB-ON-GRADE CONSTRUCTION JOINTS ARE TO BE PER DETAIL 12/S4.1
18. ANY REQUIRED SLAB-ON-GRADE WEAKENED PLANE JOINTS ARE TO BE PER DETAIL 13/S4.1
19. ALL C.M.U. WALLS SHALL BE PRECISION BLOCK, TYP. U.N.O. VERIFY w/ ARCH. DWGS.
20. FOR GAP TOLERANCE, SEE DETAIL 21/S4.2
21. FOR BENT BAR ANCHOR BOLTS, SEE DETAIL 7/S4.1
22. FOR BAR WELDING TO PLATES, SEE DETAIL 6/S4.1
23. FOR EDGE OF SLAB ON GRADE, SEE DETAIL 18/S4.1
24. S.O.G. REQUIREMENTS: S.O.G. SHALL BE UNDERLAIN BT AT LEAST 6" OF CLASS 2 AGGREGATE BASE COMPACTED TO AT LEAST 90% RELATIVE COMPACTION (ASTM D1557). SEE GEOTECHNICAL REPORT REFERENCED IN FOUNDATION NOTE #1.
25. RETAIL S.O.G. SHALL BE UNDERLAIN BY 2" SAND OVER A MINIMUM 10-MIL-THICK VAPOR BARRIER OVER AT LEAST 4 INCHES OF FREE DRAINING GRAVEL OVER AT LEAST 12 INCHES OF NON-EXPANSIVE FILL. SEE GEOTECHNICAL REPORT REFERENCED IN FOUNDATION NOTE #1 ON SHEET S1.1.

LEGEND

C-1 / PC-1 — INDICATES CONCRETE COLUMN TYPE, SEE SCHEDULE ON SHEET S4.2 AND DETAILS S4.2 24 & 25

INDICATES PIER CAP TYPE, SEE DETAIL 8/S4.3 SEE SCHEDULES ON SHEET S4.3

INDICATES SHEAR WALL TYPE, SEE ELEVATIONS ON

DETAIL 10/S4.1

S4.3A

IL 11/S4.4

F.D. — INDICATES FLOOR DRAIN, SEE ARCH. & PLUMBING DRAWINGS FOR LOCATION & SLOPE

INDICATES C.M.U. WALLS, SEE DETAILS S4.5 21, 22, 24 & 25

16 0 32 64

SCALE: 1/16" = 1'-0"

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GROUND LEVEL FOUNDATION PLAN

MOUNTAIN VIEW
PARKING STRUCTURE

MOUNTAIN VIEW, CALIFORNIA

REVISIONS		
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JOB NO	:	02044
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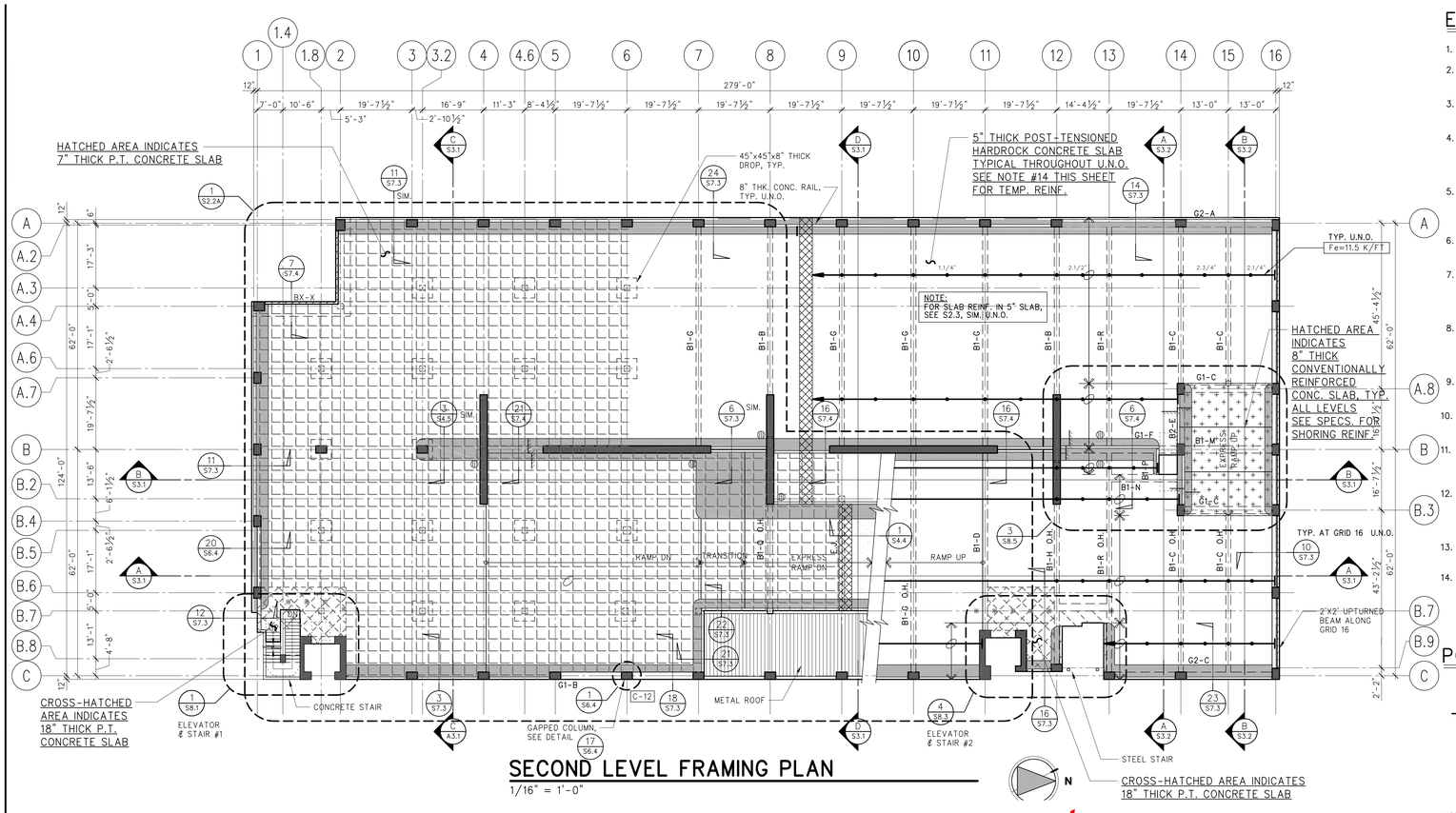
DRAWN	:	TY
CHECKED BY	:	BLIGH
FILE NAME	:	0244S21A

SHEET

S2.1A



SECOND LEVEL FRAMING PLAN

1/16" = 1'-0"

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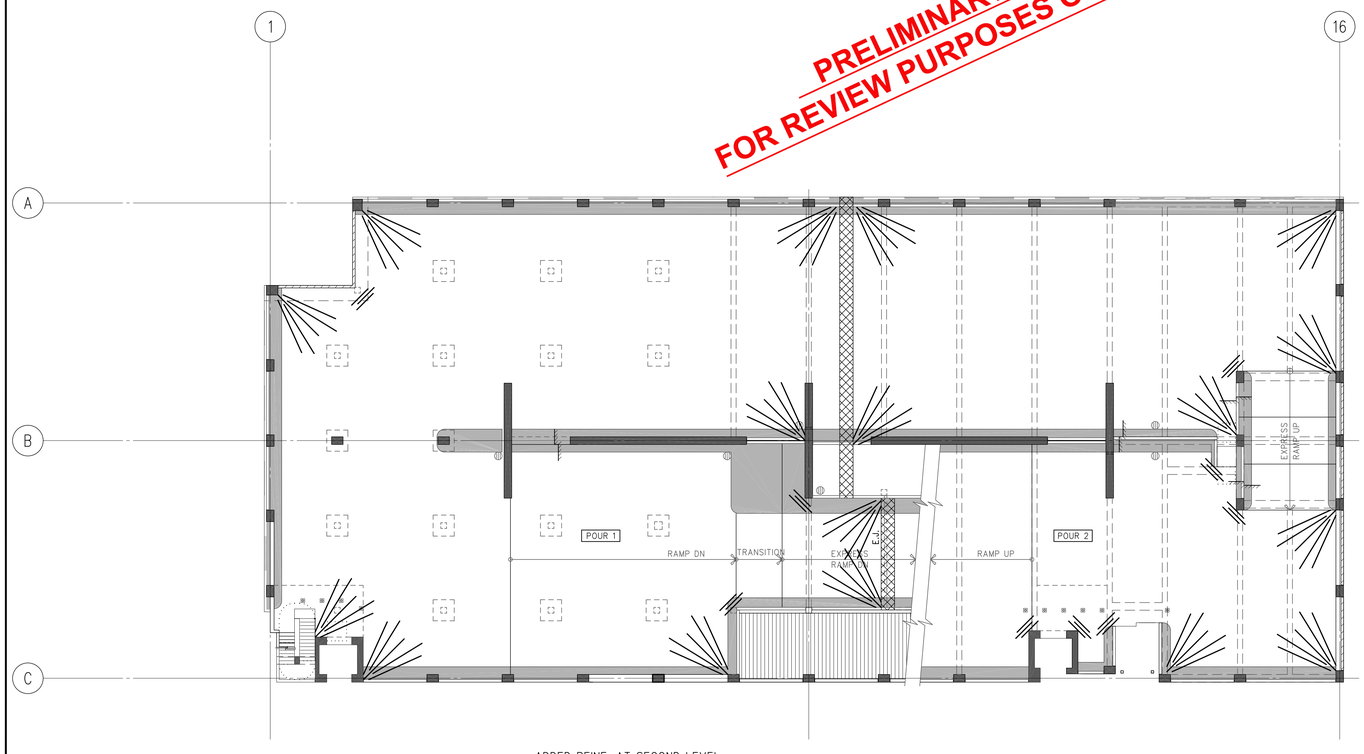


ADDED REINF. AT SECOND LEVEL

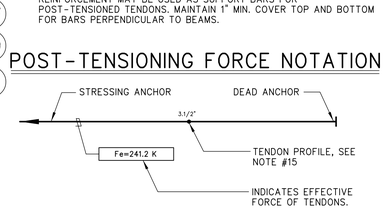
CHORD/COLLECTOR PLAN

1/16" = 1'-0"

ELEVATED SLAB NOTES

1. VERIFY ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS.
2. ANY REQUIRED SLAB CONSTRUCTION JOINT IS TO BE PER DETAIL 5/S7.1
3. FOR ANCHORAGE AT END OF BANDED TENDONS, SEE DETAIL 20/S7.1
4. ALL SLAB OPENINGS GREATER THAN 12" SQUARE (PLUMBING, ELECTRICAL, MECHANICAL,..) ARE TO HAVE MINIMUM TRIM REBAR AS PER DETAIL 1/S7.2
5. FOR REINF.WHERE MULTIPLE CONDUITS/PIPES OCCUR IN SLAB SEE DETAIL 10/S7.2
6. FOR SLAB PENETRATION AT TENDON ANCHORS, SEE DETAIL 3/S7.2
7. MINIMIZE OR ELIMINATE HORIZONTAL CURVATURE OF TENDONS WHENEVER POSSIBLE. FOR TENDON LAYOUT AT OPENINGS, SEE DETAIL 4/S7.2
8. BOTTOM REBAR NOTES: 25% OF ALL BOTTOM REINFORCEMENT SHOWN ON PLAN SHALL EXTEND CONTINUOUSLY FOR THE FULL SPAN LENGTH TO THE COLUMNS OR SUPPORTS, SEE DETAIL 10/S7.1
9. STAGGER ALL TOP AND BOTTOM REBAR PER DETAIL 10/S7.1
10. FOR SLAB EDGE CONDITION, SEE DETAIL 16/S7.2
11. ALL SLAB RE-ENTRANT CONDITIONS SHALL HAVE REINFORCEMENT PER DETAIL 6/S7.2
12. WHERE HORIZONTAL CURVATURE IN TENDONS EXCEED 1:6 PROVIDE ADDITIONAL HAIRPIN REINF. @ POINT OF MAXIMUM CURVATURE, SEE DETAIL 5/S7.2
13. ALL POST-TENSIONED TENDON ANCHORS ARE TO BE PLACED AT MID-DEPTH OF SLAB, TYPICAL THRUOUT
14. TEMP. REINF. TO BE #4@16" o/c PARALELL TO BEAM. LAPS TO BE 17" MIN., PROVIDE STANDARD HOOKS AT ALL SLAB EDGES. THIS REINFORCEMENT MAY BE USED AS SUPPORT BARS FOR POST-TENSIONED TENDONS. MAINTAIN 1" MIN. COVER TOP AND BOTTOM FOR BARS PERPENDICULAR TO BEAMS.
15. ALL TENDON PROFILES SHOWN ON PLAN ARE MEASURED FROM BOTTOM OF SLAB OR BEAM TO C.G.S. OF 1/2" DIA. TENDONS, TYPICAL THRUOUT.
16. FOR POST-TENSIONING SYSTEM, SEE DETAIL 6/S7.1
17. FOR CLOSURE POUR, SEE DETAILS → 11 & 13 /S7.1
18. FOR ADDED REINFORCEMENT @ ADDED TENDONS, SEE DETAIL 9/S7.2
19. FOR CORNER CRACK CONTROL REINF., SEE DETAILS → 7 & 8 /S7.2
20. FOR STEPPED SLAB AT RELEASED WALL, SEE DETAIL 13/S7.2
21. FOR STAGGERING ADDED TENDON DEAD ANCHORS, SEE DETAIL 9/S7.2
22. FOR TENDON & REBAR SUPPORT AT SLAB, SEE DETAIL 15/S7.1
23. FOR LOCATION OF BANDED TENDONS @ MID-SPAN, SEE DETAIL 22/S7.1
24. FOR PERMANENT RELEASE CONDITION @ C.M.U. WALL, SEE DETAIL → 18 & 24 /S7.2
25. MAX. LENGTH OF POWDER DRIVEN PINS USED SHALL NOT EXCEED 3/4".
26. USE CLASS "B" LAP FOR ALL LAP SPLICES, FOR LENGTH, SEE SCHEDULE ON SHEET PS4.1
27. DROP CAP DEPTH SHOWN ON PLAN IS MEASURED FROM BOT. OF SLAB. FOR REINF., SEE DETAIL 21/S7.1
28. MAXIMUM SPACING OF UNIFORM TENDONS IS EIGHT TIMES THE SLAB THICKNESS, OR 5 FEET.
29. FOR MULTIPLE SLAB OPENINGS, SEE DETAIL 2/S7.2
30. FOR EMBEDS AT STEEL STAIRS, SEE DETAIL 23/S7.1

POST-TENSIONING FORCE NOTATION



NOTE:
THE FOLLOWING TOTAL EFFECTIVE FORCE VALUES ARE BASED ON THE 1/2" DIA. LOW RELAXATION CABLES WITH AN EFFECTIVE DESIGN STRESS EQUAL TO 26.8 KIPS PER TENDON.

No.OF CABLES	TOTAL FORCE	No.OF CABLES	TOTAL FORCE
1	26.8 K	16	428.8 K
2	53.6 K	17	455.6 K
3	80.4 K	18	482.4 K
4	107.2 K	19	509.2 K
5	134.0 K	20	536.0 K
6	160.8 K	21	562.8 K
7	187.6 K	22	589.6 K
8	214.4 K	23	616.4 K
9	241.2 K	24	643.2 K
10	268.0 K	25	670.0 K
11	294.8 K	26	696.8 K
12	321.6 K	27	723.6 K
13	348.4 K	28	750.4 K
14	375.2 K	29	777.2 K
15	402.0 K	30	804.0 K

CHORD/COLLECTOR REINFORCEMENT

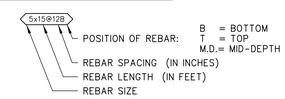
LAP SCHEDULE (2001 CBC)

BAR SIZE	MINIMUM CONCRETE THICKNESS (in)	MINIMUM CLEAR COVER (in)	MINIMUM LAP LENGTH (NORMAL WEIGHT) (in)	MINIMUM LAP LENGTH (LIGHTWEIGHT) (in)
#4	4.1/2	2	27	33
#5	4.3/4	2	33	41
#6	4.3/4	2	40	49
#7	5.1/2	2.1/4	46	58
#8	6	2.1/2	53	66
#9	7.1/4	3	59	74
#10	7.3/4	3.1/4	67	83
#11	8.1/2	3.1/2	74	92
#14	10.1/2	3	SEE NOTE #8	

1. CHORD/COLLECTOR BARS: STAGGER ALL LAP SPLICES WITH CLASS B LAP. TYP. @ ALL LEVELS.
2. CHORD/COLLECTOR REINFORCEMENT LAP SCHEDULE MAY ONLY BE USED WHEN ALL CONDITIONS ARE MET:
   a) REINFORCEMENT IS GRADE 60.
   b) MINIMUM CONCRETE STRENGTH OF 5000 psi.
   c) THERE IS LESS THAN 12" OF FRESH CONCRETE BELOW REINFORCEMENT.
   d) REINFORCEMENT IS UNCOATED.
3. UNLESS OTHERWISE NOTED ON PLAN, ALL SLAB CHORD/COLLECTOR BARS SHALL BE PLACED AT 8" o/c.
4. THESE REBAR ARE TO BE IN ADDITION TO REINFORCEMENT SHOWN ON PLAN.
5. ALL CHORD/COLLECTOR REINFORCEMENT LAP AT CLOSURE.
6. ALL DIMENSIONS NOTED SHALL BE FROM GRID LINE, U.N.O.
7. CHORD/COLLECTOR REINF. SHOWN TERMINATING AT EDGE OF BEAM OR SLAB SHALL TERMINATE WITH A STD. 90° HOOK MIN.
8. #14 BARS MAY NOT BE LAPPED, WHERE BAR TERMINATES AT EDGE OF BEAM, USE HRC T-HEAD OR EQUAL TO REDUCE CONGESTION, A TYPE 2 COUPLER MAY BE USED TO SPLICE #14 BARS.
9. CHORD/COLLECTOR REINF. SHALL NOT BE CONTINUOUS ACROSS CLOSURE STRIPS. LAP ALL REINF. WITHIN CLOSURE STRIPS PER LAP SCHEDULE.

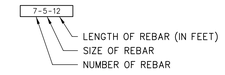
SLAB REINFORCEMENT NOTATION

SLAB REINFORCEMENT @ MIDSPANS & SLAB EDGES



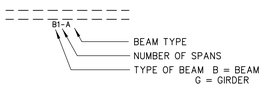
1. THESE BARS ARE TO BE IN ADDITION TO TEMPERATURE REINF. SHOWN ON PLAN.
2. AT SLAB EDGE CONDITION, HOOK REBAR SHAPE: 12db | LENGTH SEE PLAN FOR LOCATION.

SLAB TOP REINFORCEMENT @ COLUMNS AND ENDS OF SHEAR WALLS



1. REBAR PARALLEL TO BANDS ARE TOP LOWER.
2. REBAR PERPENDICULAR TO BANDS ARE TOP UPPER.
3. FOR REINFORCEMENT, REPLACEMENT, SEE DETAILS → 1, 3, 18 & 19 /S7.1
4. AT SLAB EDGE CONDITION, HOOK REBAR SHAPE: LENGTH, 180° HOOK SEE PLAN FOR LOCATION

CONCRETE BEAM NOTATION



1. FOR CONCRETE BEAM & GIRDER SCHEDULE AND DETAILS SEE SHEET S6.1

16 0 32 64

SCALE: 1/16" = 1'-0"

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SECOND LEVEL FRAMING AND CHORD/COLLECTOR PLANS

MOUNTAIN VIEW PARKING STRUCTURE

MOUNTAIN VIEW, CALIFORNIA

REVISIONS

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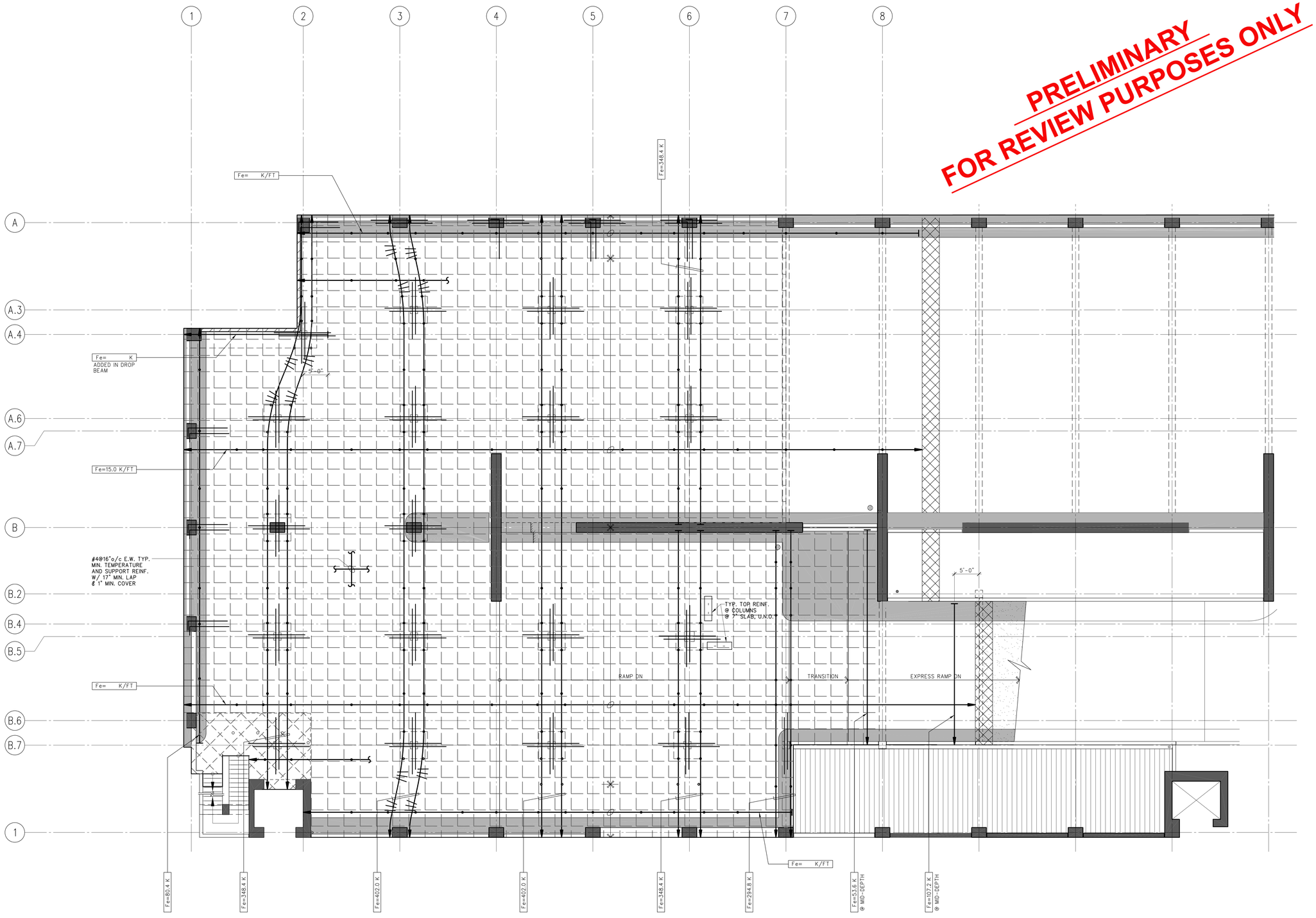
SHEET

S2.2



PARTIAL PLAN
1 / S2.2A
SECOND LEVEL FRAMING
1/8" = 1'-0"

8 0 16 32
SCALE: 1/8" = 1'-0"

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ENLARGED PARTIAL PLAN-SECOND LEVEL

MOUNTAIN VIEW PARKING STRUCTURE

MOUNTAIN VIEW, CALIFORNIA

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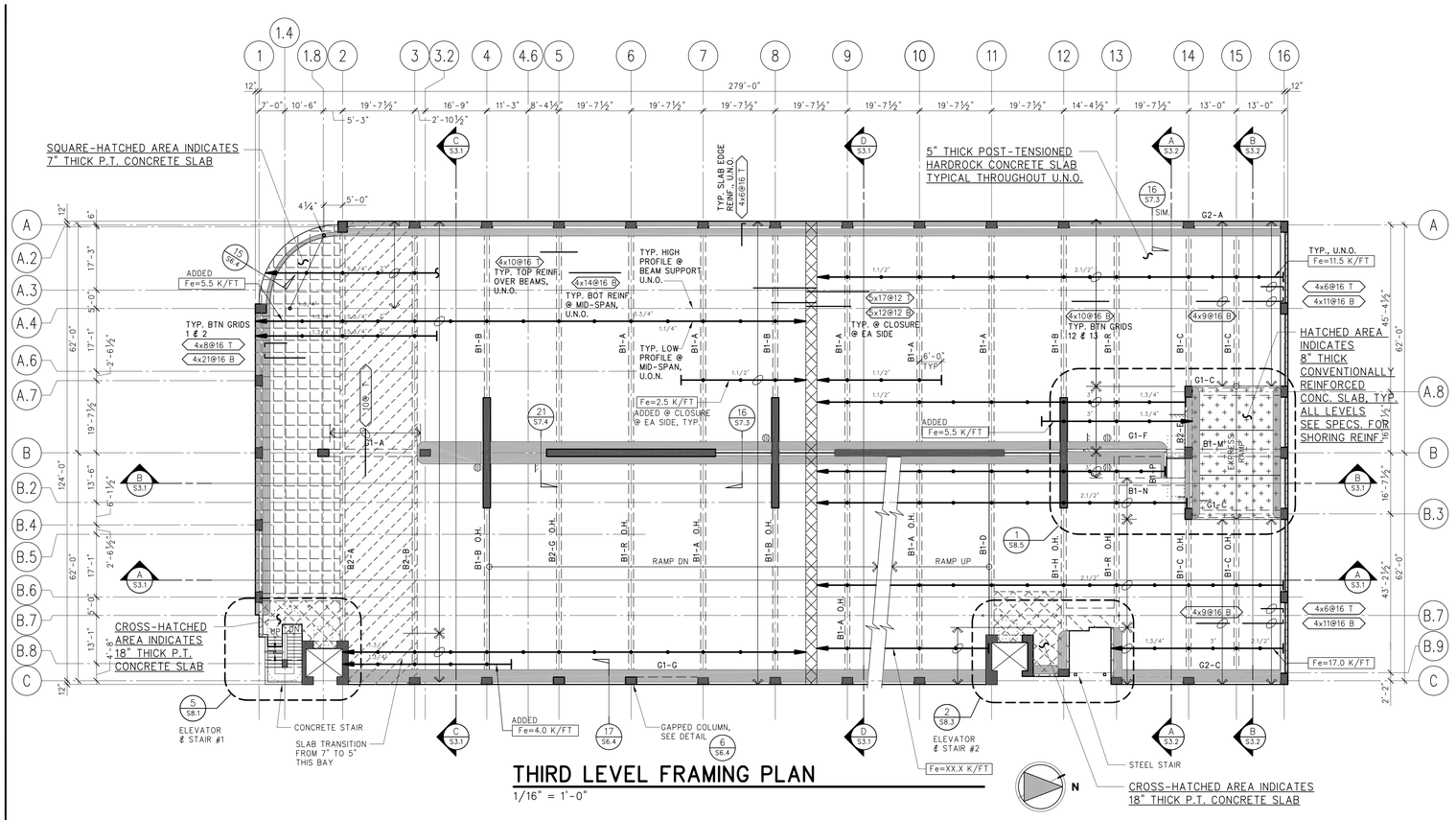
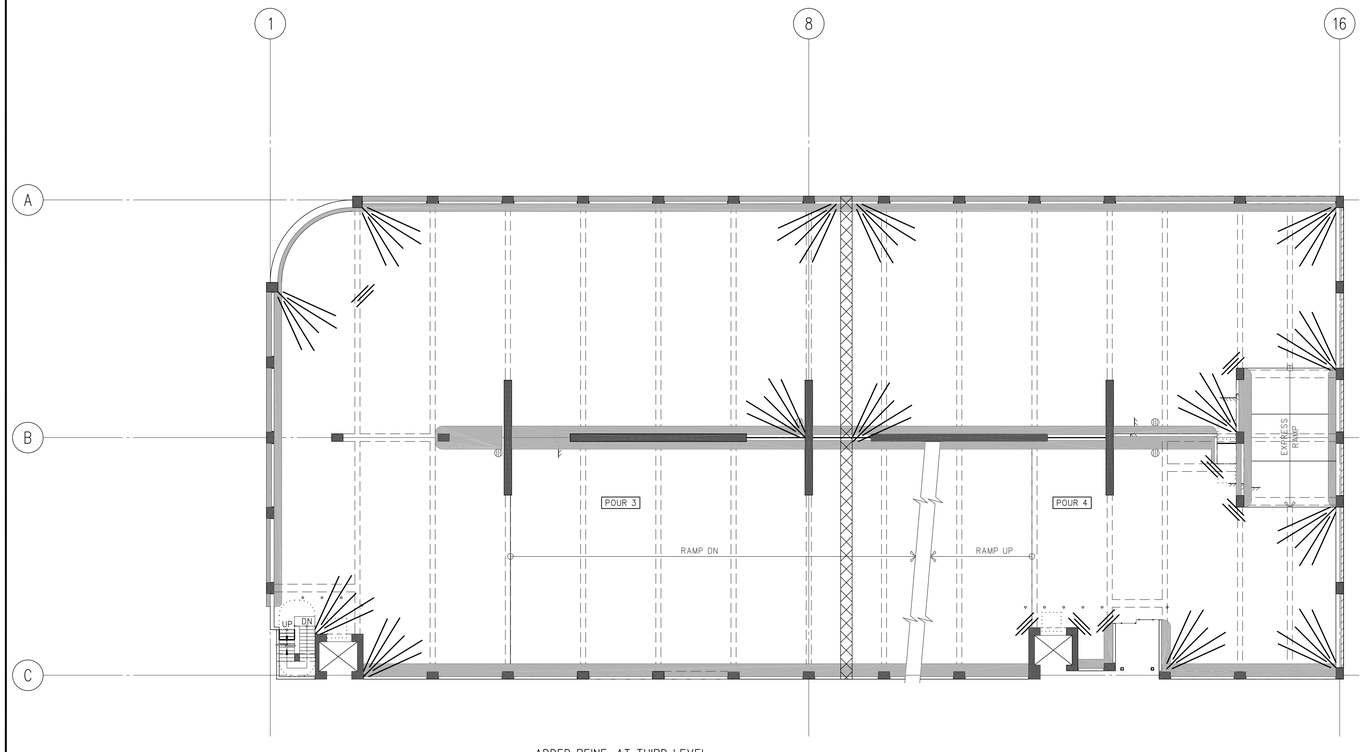
S2.2A



THIRD LEVEL FRAMING PLAN

1/16" = 1'-0"



ADDED REINF. AT THIRD LEVEL

CHORD/COLLECTOR PLAN

1/16" = 1'-0"

ELEVATED SLAB NOTES

1. VERIFY ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS.
2. FOR ELEVATED SLAB NOTES AND BALANCE OF INFORMATION SEE SHEET S2.2

CHORD/COLLECTOR KEY PLAN

1. FOR BALANCE OF INFORMATION, SEE SHEET S2.2

PRELIMINARY
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SCALE: 1/16" = 1'-0"

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THIRD LEVEL FRAMING AND CHORD/COLLECTOR PLANS

MOUNTAIN VIEW PARKING STRUCTURE

MOUNTAIN VIEW, CALIFORNIA

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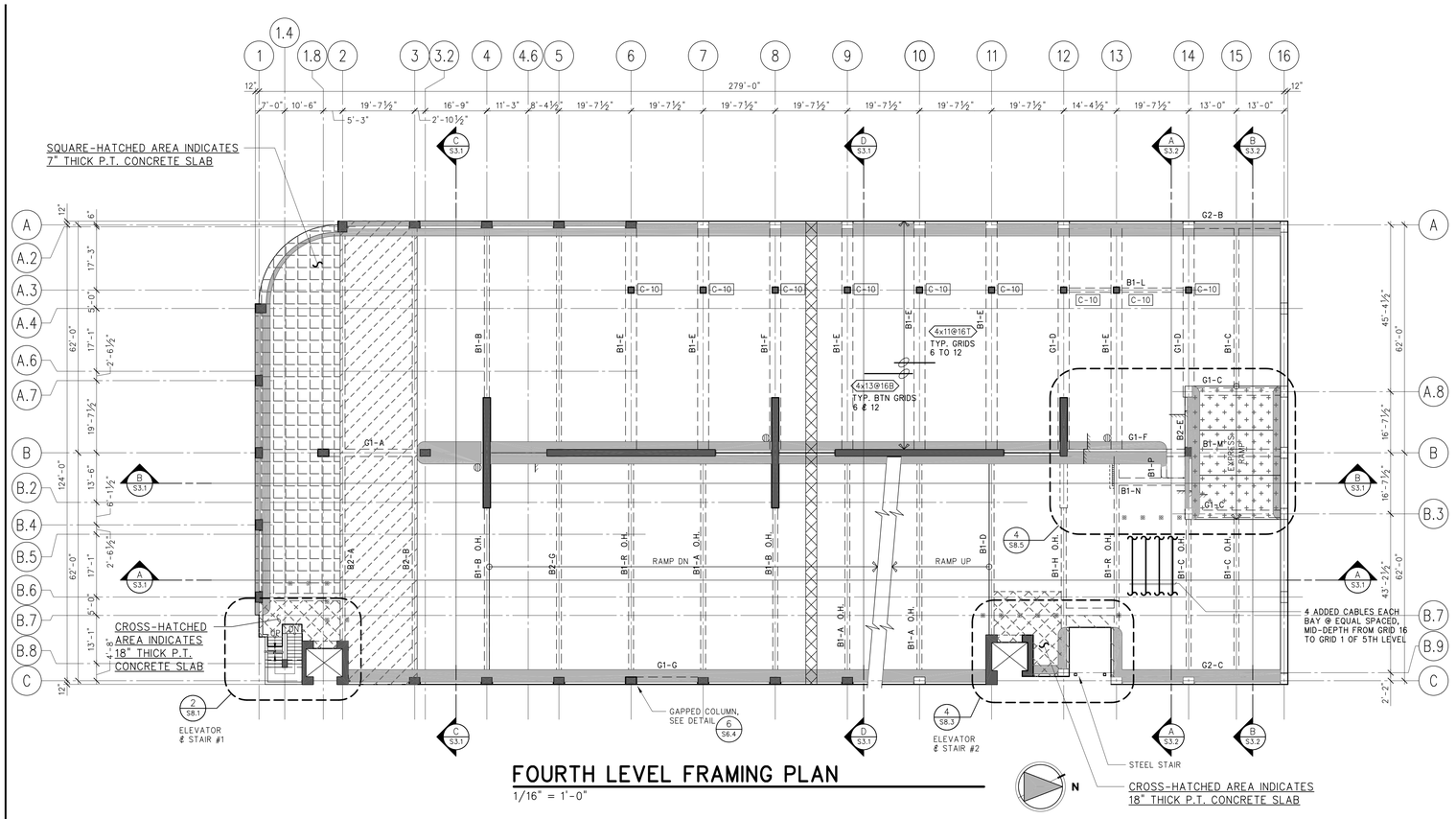
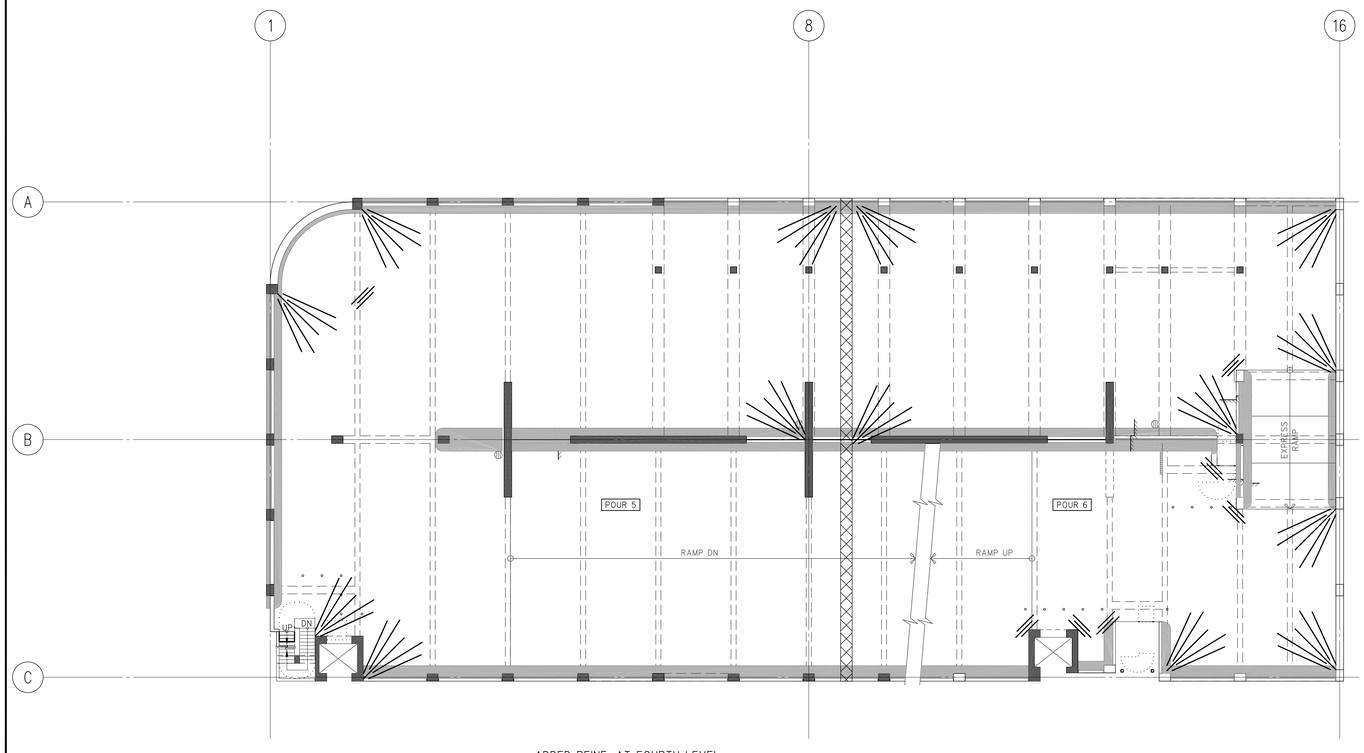
SHEET

S2.3



FOURTH LEVEL FRAMING PLAN

1/16" = 1'-0"



ADDED REINF. AT FOURTH LEVEL

CHORD / COLLECTOR PLAN

1/16" = 1'-0"

ELEVATED SLAB NOTES

1. VERIFY ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS.
2. FOR SLAB REINFORCEMENT, SEE SHEET S2.3 SIM., U.N.O.
3. FOR ELEVATED SLAB NOTES AND BALANCE OF INFORMATION SEE SHEET S2.2

CHORD/COLLECTOR KEY PLAN

1. FOR BALANCE OF INFORMATION, SEE SHEET S2.2

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FOURTH LEVEL PARKING AND CHORD/COLLECTOR PLANS

MOUNTAIN VIEW
PARKING STRUCTURE

MOUNTAIN VIEW, CALIFORNIA

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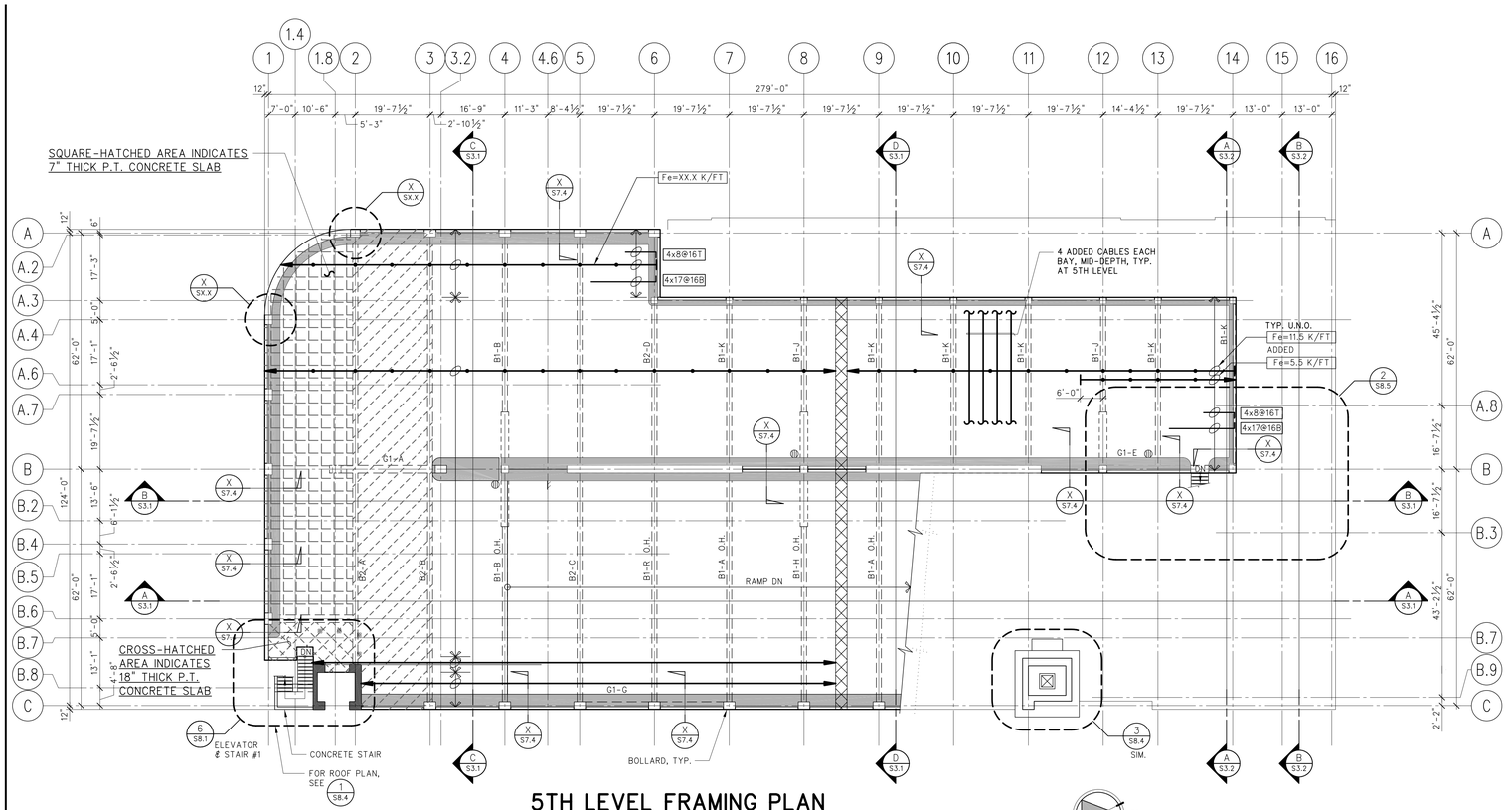
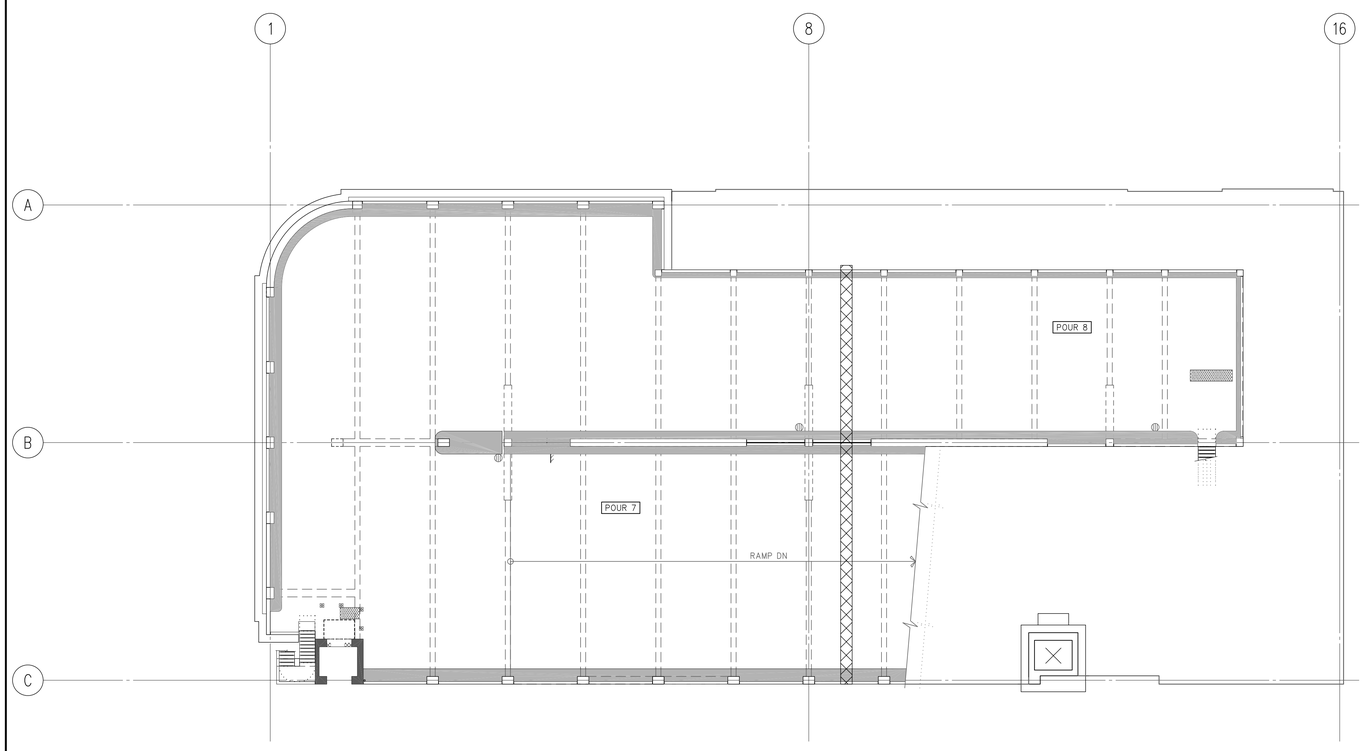
S2.4



5TH LEVEL FRAMING PLAN

SCALE : 1/16" = 1'-0"



5TH LEVEL CHORD / COLLECTOR PLAN

SCALE : 1/16" = 1'-0"

ELEVATED SLAB NOTES

1. VERIFY ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS.
2. FOR SLAB REINFORCEMENT, SEE S2.3 SIM., U.N.O.
3. FOR ELEVATED SLAB NOTES AND BALANCE OF INFORMATION SEE SHEET S2.2

CHORD/COLLECTOR KEY PLAN

1. FOR BALANCE OF INFORMATION, SEE SHEET S2.2

PRELIMINARY
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FIFTH LEVEL FRAMING AND CHORD/COLLECTOR PLANS

MOUNTAIN VIEW PARKING STRUCTURE

MOUNTAIN VIEW, CALIFORNIA

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SHEET

S2.5

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